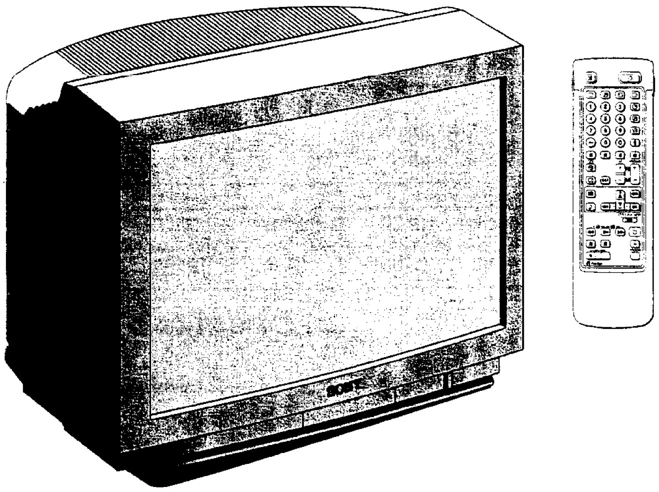
SERVICE MANUAL

AE-2B CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-A2541A	RM-831	Italian	SCC-G59G-A	KV-A2543E	RM-831	Spanish	SCC-G56G-A
KV-A2541B	RM-831	French	SCC-G57G-A	KV-A2541K	RM-831	OIRT	SCC-G73G-A
KV-A2541D	RM-831	AEP	SCC-G45H-A	KV-A2542U	RM-831	UK	SCC-G55E-A



MICROFILM

TRINITRON® COLOR TV

SONY®

ITEM MODEL	Television System	Stereo System	Channel Coverage	Color System
Italian	B/G/H, D/K	GERMAN Stereo	ITALIA VHF:A-H2 (C) UHF: 21-69 PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
French	B/G/H, D/K L, I	GERMAN Stereo French Nicam	L VHF:F02-F10 UHF:F21-F60 CABLE:B-Q B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 I UHF:B21-B69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
AEP	B/G/H, D/K	GERMAN Stereo	PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
Spanish	B/G/H, D/K	GERMAN/NICAM Stereo	PAL B/G VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
OIRT	B/G/H, D/K	GERMAN Stereo	B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
UK	I	NICAM Stereo	UHF : B21-B69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)

MODEL	Italian	French	AEP	Spanish	OIRT	UK
Power Consumption	107W	124W	124Wh	124Wh	124Wh	160W

SPECIFICATIONS

Picture Tube	Super Trinitron Approx. 63 cm (25 inches) (Approx. 59 cm picture measured diagonally) 110° -deflection

Input/Output Terminals

[REAR]

⊖-1 21-pin Euro connector (CENELEC standard)
- inputs for audio and video signals
- inputs for RGB
- outputs of TV video and audio signals

⊖2/⊖S 2 21-pin Euro connector
- inputs for audio and video signals
- inputs for S video
- outputs for audio and video signals (selectable)
- Ext Left/Right speaker terminals.
- Center and Surround speaker terminals.

[FRONT]

⊖3 Video input - phono jack

⊖ Audio inputs - phono jacks

⊖S3 S video input 4-pin DIN

Ω Headphone jacks : stereo minijack

Sound output	3 x 15W RMS (LRC) 3 x 30W Music Power (LRC) 2 x 4W RMS (S) 2 x 7.5W Music Power (S)
Power requirements	220 - 240V
Dimensions	Approx. 678x502x512 mm
Weight	Approx. 40kg
Supplied accessories	RM-831 Remote Commander (1) IEC designation R6 battery (1) Center Speaker (1), Center Speaker Lead (1) Surround Speakers (2), Surround Speaker Lead (2)
Other features	NICAM , FASTEXT, GRAPHIC EQUALISER, DOLBY PRO LOGIC

[RM-831]

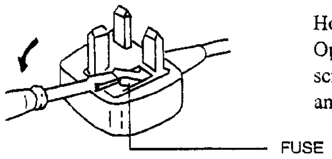
Remote control system	Infrared control
Power requirements	1.5V dc 1 battery IEC designation R6 (size AA)
Dimensions	Approx. 65x225x21 mm (w/h/d)
Weight	Approx. 157g (Not including batteries)

Design and specifications are subject to change without notice.

Model name Item	KV-A2541A	KV-A2541B	KV-A2541D	KV-A2543E	KV-A2541K	KV-A2542U
Pal comb	OFF	OFF	OFF	OFF	OFF	OFF
PIP	OFF	OFF	OFF	OFF	OFF	OFF
RGB Priority	ON	ON	OFF	OFF	OFF	OFF
Graphic Equaliser	ON	ON	ON	ON	ON	ON
Dolby	ON	ON	ON	ON	ON	ON
Scart 1	ON	ON	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON	ON	ON
Just 60 Prog.	OFF	OFF	OFF	OFF	OFF	ON
Dyn. Convergence	OFF	OFF	OFF	OFF	OFF	OFF
Projector	OFF	OFF	OFF	OFF	OFF	OFF
AKB in 16:9 mode	ON	ON	ON	ON	ON	ON
Norm B/G	ON	ON	ON	ON	ON	OFF
Norm I	OFF	ON	OFF	OFF	OFF	ON
Norm D/K	ON	ON	ON	ON	ON	OFF
Norm AUS	OFF	OFF	OFF	OFF	OFF	OFF
Norm L	OFF	ON	OFF	OFF	OFF	OFF
Norm SAT	OFF	OFF	OFF	OFF	OFF	OFF
Norm M	OFF	OFF	OFF	OFF	OFF	OFF
Bass Offset	OFF	OFF	OFF	OFF	OFF	OFF
Treble Offset	OFF	OFF	OFF	OFF	OFF	OFF
NICAM (L)	OFF	ON	OFF	OFF	OFF	OFF
Language Preset	Italiano	Francais	Deutsch	None	OIRT	English

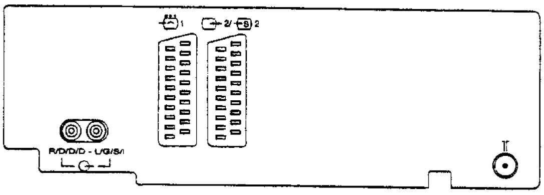
WARNING (KV-A2542U only)

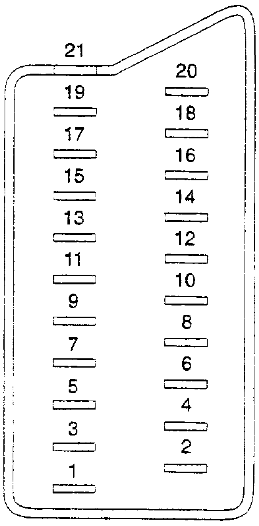
The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** capacity. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by **ASTA** to **BS 1362**, ie one that carries the ◈ mark.
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME. IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED. THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET.
When an alternative type of plug is used it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse.
Open the fuse compartment with the screwdriver blade
and replace the fuse.

21 pin connector (⊕-1 ⊖2/⊖4)





Pin No.	1	2	4	Signal	Signal level
1	○	○	○	Audio output B (right)	Standard level : 0.5V rms Output impedance : Less than 1kohm*
2	○	○	○	Audio input B (right)	Standard level : 0.5V rms Output impedance : More than 10kohm*
3	○	○	○	Audio output A (left)	Standard level : 0.5V rms Output impedance : Less than 1kohm*
4	○	○	○	Ground (audio)	
5	○	○	○	Ground (blue)	
6	○	○	○	Audio input A (left)	Standard level : 0.5V rms Output impedance : More than 10kohm*
7	○	●	●	Blue input	0.7 ± 3dB, 75 ohms, positive
8	○	○	○	Function select (AV control)	High state (9.5 - 12V) : Part mode Low state (0 - 2V) : TV mode Input impedance : More than 10k ohms Input capacitance : Less than 2nF
9	○	○	○	Ground (green)	
10	○	○	○	Open	
11	○	●	●	Green	Green signal : 0.7 ± 3dB, 75 ohms, positive
12	○	○	○	Open	
13	○	○	○	Ground (red)	
14	○	○	○	Ground(blanking)	
15	○	–	–	Red input	0.7 ± 3dB, 75 ohms, positive
	–	○	○	(S signal) croma input	0.3 ± 3dB, 75 ohms, positive
16	○	●	●	Blanking input (Ys signal)	High state (1 - 3V) Low state (0 - 0.4V) Input impedance : 75ohms
17	○	○	○	Ground(video output)	
18	○	○	○	Ground(video input)	
19	○	○	○	Video output	1V ± 3dB,75ohms,positive sync: 0.3V(-3+10dB)
20	○	–	–	Video input	1V ± 3dB,75ohms,positive sync: 0.3V(-3+10dB)
	–	○	○	Video input Y (S signal)	1V ± 3dB,75ohms,positive sync: 0.3V(-3+10dB)
21	○	○	○	Common ground (plug, shield)	

○ Connected   ● Not Connected (open)   * at 20Hz - 20kHz

Pin No	Signal	Signal level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75 ohm , positive Sync. 0.3V -3/+10 dB
4	C (S signal) input	0.3V ± 3dB 75 ohm , positive Sync.

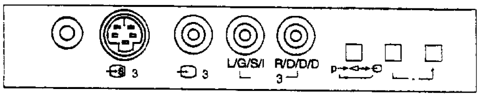


TABLE OF CONTENTS

Section *Title* *Page*

1. GENERAL

Overview 6
Step 1 - Preparation 7
Step 2 - Connection 7
Step 3 - Tuning in to TV stations 8
Additional Presetting Functions 9
Watching the TV 11
Adjusting and Setting the TV Using the Menu 12
Teletext 15
Connecting and Operating optional Equipment 18

2. DISASSEMBLY

2-1. Rear Cover Removal 22
2-2. Chassis Assy Removal 22
2-3. Service Position 23
2-4. Extension Boards 23
2-5. M2 and A3 Board Removal 24
2-6. D5 Board Removal 24
2-7. J and K1 Board Removal 25
2-8. F Bracket Removal 25
2-9-1. Wire Dressing 26
2-9-2. Wire Dressing 26
2-10. Picture Tube Removal 27

3. SET-UP ADJUSTMENTS

3-1. Beam Landing 28
3-2. Convergence 29
3-3. Focus 31
3-4. White Balance 31

4. CIRCUIT ADJUSTMENTS

4-1. Electrical Adjustments 32
4-2. Volume Electrical Adjustments 36
4-3. Test Mode 2 37
4-4. Error Message 38
4-5. Error I^2C Bus Diagnosis System in AE-2B Chassis 38

5. DIAGRAMS

5-1. Block Diagram (1) 39
Block Diagram (2) 44
5-2. Circuit Board Location 49
5-3. Schematic Diagrams and Printed Wiring Boards 49
  * H1 Board 50
  * H2 Board 50
  * F2 Board 50
  * F1 Board 50
  * J Board 54
  * A Board 59
  * M2 Board 66
  * D Board 70
  * A3 Board 74
  * C Board 77
  * D5 Board 78
  * K1 Board 78
  * IF Board 82
5-4. Schematic Diagram of Tuner 89
5-5. Semiconductors 90

6. EXPLODED VIEWS

6-1. Chassis 92
6-2. Picture Tube 93
7. ELECTRICAL PARTS LIST 94

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVAL OF THE ANODE CAP.

WARNING !!

AN ISOLATING TRANSFORMER SHOULD BE USED DURING ANY SERVICE WORK TO AVOID POSSIBLE SHOCK HAZARD, DUE TO A LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARKED ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLIMENTS PUBLISHED BY SONY.

ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENTION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÈ LORS DE TOUT DÈPANNAGE. LE CHÁSSIS DE CE RÈCEPTEUR EST DIRECTEMENT RACCORDÈ Á L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS Á LA SÈCURITÈ !!

LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES SCHÈMAS DE PRINCIPE, LES VUES EXPLOSÈES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÈCURITÈ DU FONCTIONNEMENT, NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÈRO DE PIÈCE EST INDIQUÈ DANS LE PRÈSENT MANUEL OU DANS DES SUPPLÈMENTS PUBLIÈS PAR SONY.

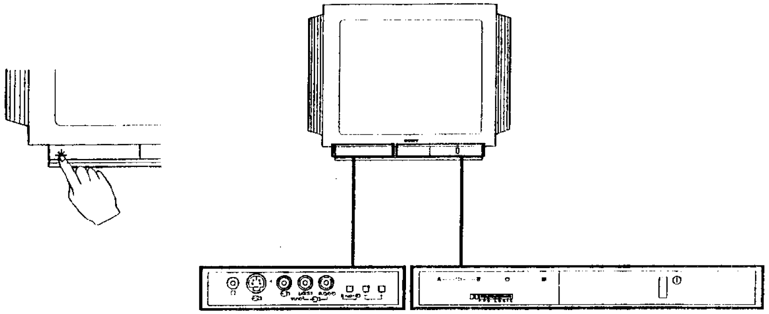
SECTION 1 GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

Overview

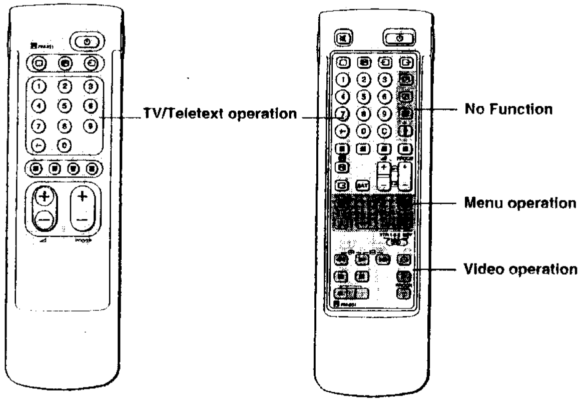
This section briefly describes the buttons and controls on the TV set and on the Remote Commander. For more information, refer to the pages given next to each description.

TV set - front



Symbol	Name	Refer to page
ⓘ	Main power switch	42
⏻	Standby indicator	42
A-ⓄⒹ-B	Stereo A/B indicators	44
Ω	Headphones jack	50
→Ⓢ 3, →▭, 3 →⊙ 3	Input jacks (S-video/video/audio)	50
P→⊿→⊙	Function selector (Programme/volume/input)	42
– +	Adjustment buttons for function selector	42

Remote Commander RM-831



Simple side　Full-Function side

Note
The SAT button does not operate with this TV.

TV/Teletext operation

Symbol	Name	Refer to Page
🔇	Mute on/off button	43
⏻	Standby button	42
▭	TV power on/TV mode selector button	42
⊜	Teletext button	43
→⊙	Input mode selector	43
⊙→	Output mode selector	51
1,2,3,4,5,6, 7,8,9, and 0	Number buttons	42
-/--	Double-digit entering button	42
C	Direct channel entering button	39
⊿+/–	Volume control button	42
PROGR +/–	Programme selectors	42
⊜⊜	Teletext page access buttons	47
●	Picture adjustment button	44
♪	Sound adjustment button	44
⊕	On-screen display button	43
⊜	Teletext hold button	47
◷	Time display button	43
■■■■	Fastext buttons	47

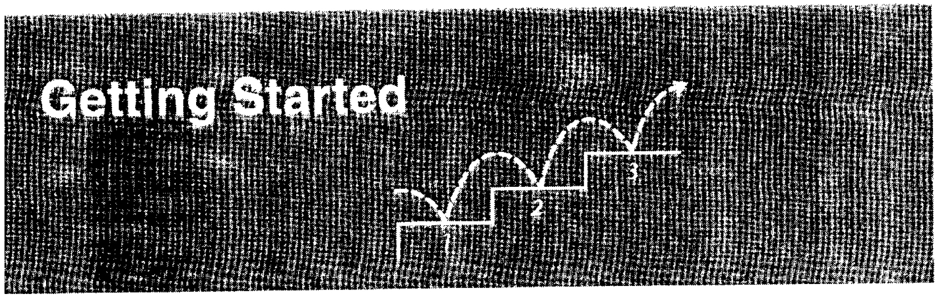
Menu operation

Symbol	Name	Refer to Page
MENU	Menu on / off button	36
△+/▽–	Select buttons	36
OK	OK (confirming) button	36
⬅	Back button	36

Video operation

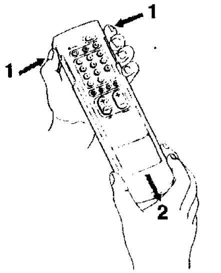
Symbol	Name	Refer to Page
VTR1/2/3 MDP	Video equipment selector	52
◀◀ ▶ ▶▶ ■ ❚❚ ● ⏻ PROGR +/–	Video equipment operation buttons	52

Getting Started

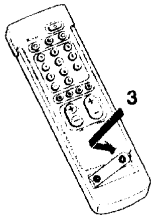


Step 1 Preparation

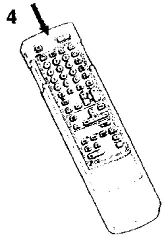
Insert the battery into the Remote Commander



Remove the cover.



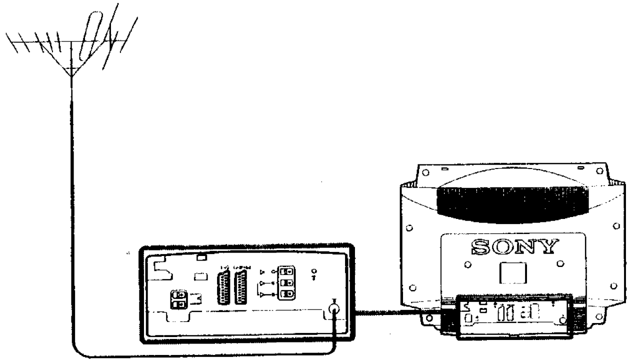
Check the correct polarity.



Refit the outside cover making sure that the Full-Function side is visible to use the menu in Step 3.

Step 2 Connection

❶ Connect the aerial



Fit an IEC aerial connector attached to 75-ohm coaxial cable (not supplied) to the ⫪ socket at the rear of the TV.

Note: Connect the speakers using the leads provided making sure to observe the following polarity:-
The striped lead is (+) and should be connected to the red terminal on the speaker.
The black lead is (-) and should be connected to the black terminal on the speaker
Note: If you don't connect the centre speaker, set the "Centre Mode" to "Phantom". For details, refer to page 46.

Note: If you prefer to use your own speakers , make sure they are at least 8Ω impedance and are magnetically shielded otherwise picture distortion may occur.

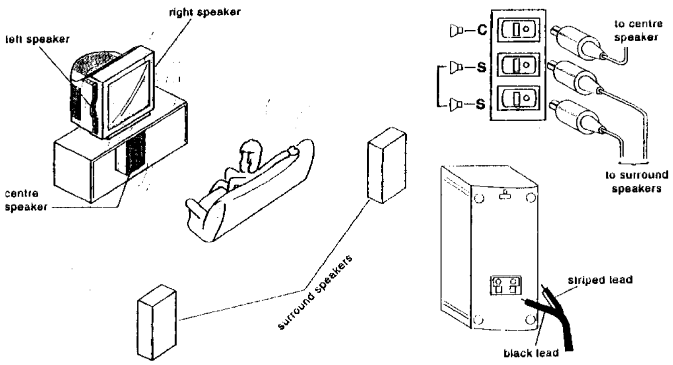
❷ Connecting the speakers

Dolby Pro Logic (*) Surround requires normally 5 speakers, whose functions are as follows:
Centre speaker: to anchor the stable sound image, like dialogue, to the TV screen.
Left and Right front speakers: for the normal two-channel stereo broadcasts.
Surround speakers: for the special effects created by the surround channel.

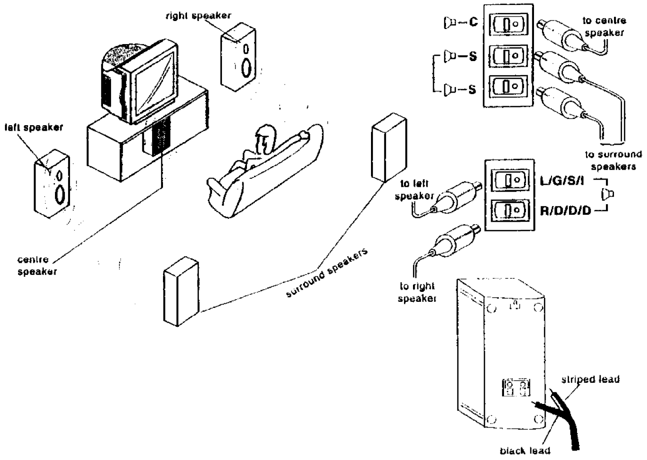
To obtain the full benefit of your Dolby Pro Logic Surround TV, the speakers should be positioned as shown below:

Before switching on: connect the speakers to the TV set.

a. Connect the speakers provided only:-

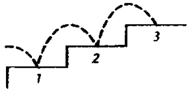

right speaker
left speaker
centre speaker
surround speakers
C
S
S
to centre speaker
to surround speakers
striped lead
black lead

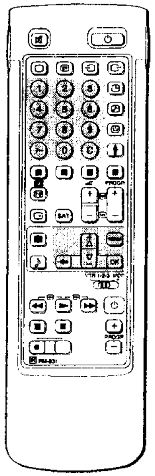
b. Connect your own speakers:-


right speaker
left speaker
centre speaker
surround speakers
C
S
S
to centre speaker
to surround speakers
to left speaker
L/G/S/I
R/D/D/D
to right speaker
striped lead
black lead

(*) Manufactured under license from Dolby Laboratories Licensing Corporation. DOLBY and the double-D symbol ⅮⅮ are trademarks of Dolby Laboratories Licensing Corporation.

Step 3 Tuning in to TV Stations



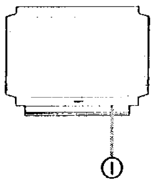


Once you have set up the TV, you can choose the language of the menu. Then you should preset the channels (up to 60 channels) by choosing either the automatic or manual method.

The automatic method is easier if you want to preset all receivable channels at once. Use the manual method if you only have a few channels and want to preset channels one by one. The manual method is also convenient for allocating programme numbers to various video input sources.

Before you begin

- Check that the Full-Function side of the Remote Commander is visible.
- Locate Menu operation buttons on the Remote Commander. They are shaded in the illustration at the left.



To go back to main menu:
Keep pressing ←.

To go back to the normal TV picture:
Press MENU. Normal TV picture will be restored after one minute if menu functions are not selected.

Note on the Demo function:
If you choose Demo on the main menu, you can see a sequential demonstration of the menu functions. Press MENU to stop the function.

❶ Choose a language

1 Depress ⓘ on the TV.
The TV will switch on. If the standby indicator on the TV is lit, press ○ or a number button on the Remote Commander.

2 Press the MENU button.
The LANGUAGE menu appears. (See Fig. 1)

MENU

3 Select the language you want with △+ or ▽–, and then press OK.

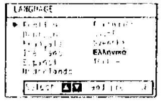


Fig. 1.

❷ Display the Menu

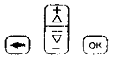
Press the ← button.
The main menu appears. (See Fig. 2)

Now, choose one of the methods described overleaf:

"Preset Channels Automatically"

or

"Preset Channels Manually".



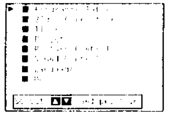


Fig. 2.

With this method, you can preset all receivable channels at once.

To stop automatic channel presetting:
Press ← on the Remote Commander.

Notes:

- After presetting the channels automatically, you can check which channels are stored on which programme positions. For details, see "Using the Programme Table" on page 43.
- You can sort the programme positions to have them appear on screen in the order you like. For details, see "Sorting Programme Positions" on page 39.
- Programme names are automatically taken from Teletext if available. If not please refer to page 40 "Captioning a station name" for further information.

❸ Preset channels automatically

1 Select `Preset` with △+ or ▽– and press OK.
The `PRESET` menu appears. (See Fig. 3.)

2 Select `Auto Programme` with △+ or ▽– and press OK.
The `AUTO PROGRAMME` menu appears. (See Fig. 4.)

3 Press OK.
Select if necessary the TV broadcast system with △+ or ▽– and press OK. (B/G for western European countries, D/K for eastern European countries) The first element of the "PROG" number will be highlighted.

4 Select the programme (number button) from which you want to start presetting. Select the first element of the double-digit number with △+ or ▽– and press OK or select with the number buttons (e.g. For "04", select "0" here).
The second element of "PROG" is highlighted.

5 Select the second element of the double-digit number with △+ or ▽– or the number buttons (e.g. For "04", select "4" here) (See Fig. 5.) and press OK.

6 Select "C" or "S" with △+ or ▽– and press OK. The automatic channel presetting starts.
When presetting is finished, the preset menu reappears. All available channels are now stored on successive number buttons. (Press MENU to restore normal TV picture).

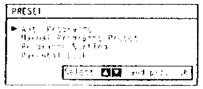


Fig. 3.

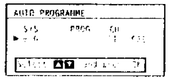


Fig. 4.

Fig. 5.

Use this method if there are only a few channels in your area to preset or if you want to preset channels one by one. You may also allocate programme numbers to various video input sources.

If you have made a mistake:
Press ← to go back to the previous position.
To go back to main menu
Keep pressing ←.
To go back to the normal TV picture
Press MENU.

To tune in a channel by frequency:
After selecting F in step 5, enter three digits using the number buttons.
Press OK.

❸ Preset channels manually

1 Select `Preset` with △+ or ▽– and press OK.
The `PRESET` menu appears. (See Fig. 6.)

2 Select `Manual Programme Preset` with △+ or ▽– and press OK.
The `MANUAL PROGRAMME PRESET` menu appears. (See Fig. 7.)

3 Using △+ or ▽–, select the programme position (number button) to which you want to preset a channel, and press OK.
Keep pressing ▽– to select programme numbers higher than 10.

4 Select if necessary the TV broadcast system (B/G for western European countries, D/K for eastern European countries) or a video input source (EXT) with △+ or ▽–. Then press OK. The CH position will be highlighted. (See Fig. 8.)

5 Using △+ or ▽–, select C (to preset a regular channel), or F (to tune in by frequency), or S (cable channel) and press OK.
The first element of the "CH" number is highlighted.
If you have selected EXT in step 4, select the video input source with △+ or ▽–. (See Fig. 9.)

There are two ways to preset channels. If you know the channel number, go to step "6-Manual",

or

if you don't know the channel number, go to step "6- Search".

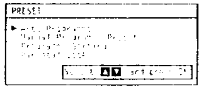


Fig. 6.

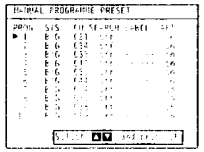


Fig. 7.

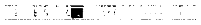


Fig.8.

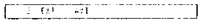


Fig.9.

If you have made a mistake:
Press ⬅ to go back to the previous position.
To go back to main menu
Keep pressing ⬅.
To go back to the normal TV picture
Press MENU.

6 ***Manual***

-a Select the first element of the "CH" number with △+ / ▽– and press OK or select with the number buttons.
The second element of the "CH" number is highlighted.

-b Select the second element of the number with △+ / ▽– or the number buttons.
The selected number appears. (See Fig. 10.)

-c Press OK
The "SEARCH" position is highlighted and the selected channel is now stored. (See Fig. 11.)

-d Press OK until the cursor appears by the next programme position.

-e Repeat steps 3 to 6 to preset other channels.

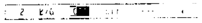


Fig.10.

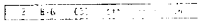


Fig.11.

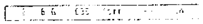


Fig.12.

Fig.13.

6 ***Search***

-a Press OK repeatedly until the colour of the SEARCH position changes.

-b Start searching for the channel with △+ (up) or ▽– (down).
The CH position changes colour. (See Fig. 12.)
The CH number starts counting up or downwards. When a channel is found, it stops. (See Fig. 13.)

-c Press OK if you want to store this channel. If not, press △+ or ▽– to continue channel searching.

-d Press OK until the cursor appears by the next programme position.

-e Repeat steps 3 to 6 to preset other channels.

❹ Presetting Dolby Pro Logic

To adjust the individual speaker level:
see page 46.

To enjoy the programmes encoded in Dolby Surround, preset the Digital Surround mode to Dolby Pro Logic.

1 Press ♪ on the Remote Commander.
The `SOUND CONTROL` menu appears (Fig. 14).
2 Using △+ or ▽– select `Digital Surround` then press OK.
The current mode appears.
3 Using △+ or ▽– select `Dolby Pro Logic` then Press OK.
The Surround mode is set to Dolby Pro Logic.
4 Press MENU to return to the normal screen.

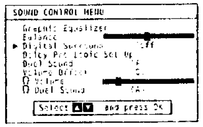
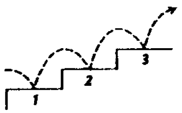


Fig. 14.

Additional Presetting Functions

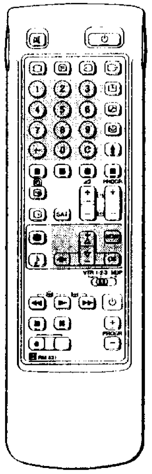


This section shows you additional presetting functions such as sorting or skipping programme positions, captioning a station name, manual fine-tuning, and using the parental lock.

Before you begin

- Check that the Full Function side of the Remote Commander is visible
- Locate the Menu operation buttons.

PROGRAMME SORTING



For higher programme positions:
The display scrolls automatically.

If you have made a mistake:
Press ⬅ to go back to the previous position.
To go back to main menu:
Keep pressing ⬅.
To go back to the normal TV picture:
Press MENU.

Sorting Programme Positions

With this function, you can sort the programme positions to a preferable order.

1 Press MENU to display the main menu.
2 Select `Preset` with △+ or ▽– and press OK.
The `PRESET` menu appears.
3 Select `Programme Sorting` with △+ or ▽– and press OK.
The `PROGRAMME SORTING` menu appears. (See Fig. 15.)
4 Using △+ or ▽–, select the programme position you want to move to another programme position and press OK.
The colour of the selected position changes. (See Fig. 16.)
5 Using △+ or ▽–, select the programme position to which you want to move the selected programme and press OK. Now the two programme positions have been sorted. (See Fig. 17.)
6 Repeat steps 4 and 5 to exchange other programme positions.

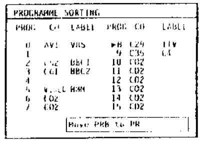


Fig. 15.

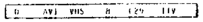


Fig. 16.

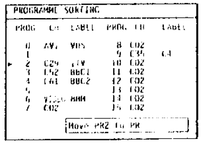


Fig. 17.

Tuning in a Channel Temporarily

You can tune in a channel temporarily, even when it has not been preset. Use the buttons on the Full-Function side of the Remote Commander.

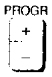
Ⓒ

1 Press C on the Remote Commander. For cable channels, press C twice.
The indication "C" ("S" for cable channels) appears on the screen.
2 Enter the double-digit channel number using the number buttons (e.g. for channel 4, first press 0, then 4).

MANUAL PROGRAMME PRESET

Skipping Programme Positions

You can skip unused programme positions when selecting programmes with the PROGR +/- buttons. However, the skipped programmes may still be called up when you use the number buttons.



1 Press MENU to display the main menu.

2 Select `Preset` with △+ or ▽– and press OK.
The `PRESET` menu appears.

3 Select `Manual Programme Preset` with △+ or ▽– and press OK.
The `MANUAL PROGRAMME PRESET` menu appears. (See Fig.18.)

4 Using △+ or ▽–, select the programme position which you want to skip and press OK.
The "SYSTEM" position changes colour.

5 Press △+ or ▽– until – – – appears in the SYSTEM position. (See Fig. 19.)

6 Press OK. (See Fig. 20.)
When you select programmes using the PROGR +/– buttons, the programme position will be skipped.

7 Repeat steps 4 to 6 to skip other programme positions.

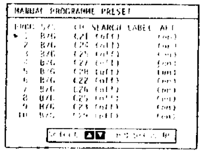


Fig. 18.

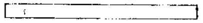


Fig. 19.

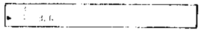


Fig. 20.

MANUAL PROGRAMME PRESET

Captioning a Station Name

Programme names are automatically taken from Teletext if available. However you can also "name" a channel or an input video source using up to five characters (letters or numbers) to be displayed on the TV screen (e.g. BBC1). Using this function, you can easily identify which channel or video source you are watching.

1 Press MENU to display the main menu.

2 Select `Preset` with △+ or ▽– and press OK.
The `PRESET` menu appears.

3 Select `Manual Programme Preset` with △+ or ▽– and press OK.
The `MANUAL PROGRAMME PRESET` menu appears. (See Fig. 21.)

4 Using △+ or ▽–, select the programme position you want to caption and press OK repeatedly until the first element of the LABEL position is highlighted.

5 Select a letter or number with △+ or ▽– and press OK.The next element will be highlighted.
Select other characters in the same way. If you want to leave an element blank, select – and press OK. (See Fig. 22.)

6 After selecting all the characters, press OK repeatedly until the cursor appears by the next programme position (at the left margin). Now the caption you chose is stored. (See Fig. 23.)

7 Repeat steps 5 and 6 to caption names for other channels.

If you have made a mistake:
Press ← to go back to the previous position.

To go back to main menu:
Keep pressing ←.

To go back to the normal TV picture:
Press MENU.

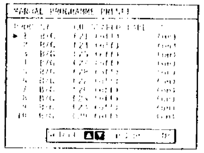


Fig. 21.

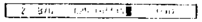


Fig. 22.

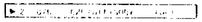


Fig. 23.

MANUAL PROGRAMME PRESET

Manual Fine-Tuning

Normally, the AFT(automatic fine-tuning) is already operating. However, if the picture is distorted, you can use the manual fine tuning function to obtain better picture reception.

1 Press MENU to display the main menu.

2 Select `Preset` with △+ or ▽– and press OK.
The `PRESET` menu appears.

3 Select `Manual Programme Preset` with △+ or ▽– and press OK.
The `MANUAL PROGRAMME PRESET` menu appears. (See Fig. 24.)

4 Using △+ or ▽– , select the programme position corresponding to the channel which you want to manually fine-tune, and press OK repeatedly until the AFT position changes colour.

5 Fine-tune the channel with △+ or ▽– so that you get the best TV reception. As you press the cursor buttons, the frequency changes from –15 to +15. (See Fig. 25.)

6 After fine tuning, press OK.
The cursor appears beside the next programme position (at the left margin). (See Fig. 26.) Now the fine-tuned level is stored.

7 Repeat steps 4 to 6 to fine-tune other channels.

To reactivate AFT (automatic fine tuning):
Repeat from the beginning and select "ON" in step 5.

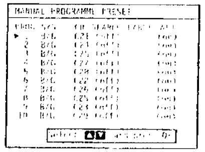


Fig. 24.

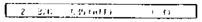


Fig. 25.

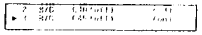


Fig. 26.

PARENTAL LOCK

Parental Lock

You can prevent undesirable broadcasts from appearing on the screen. We suggest you use this function to prevent children from watching programmes which you consider unsuitable.

1 Press MENU to display the main menu.

2 Select `Preset` with △+ or ▽– and press OK.
The `PRESET` menu appears.

3 Select `Parental Lock` with △+ or ▽– and press OK.
The `PARENTAL LOCK` menu appears. (See Fig. 27.)

4 Using △+ or ▽–, select the programme position you want to block and press OK.
The CH and LABEL, of the selected programme number, change colour indicating that this programme is now blocked. (See Fig. 28.)

5 Repeat step 4 to block other programme positions.

Cancelling blocking

1 On the `PARENTAL LOCK` menu, select the programme position you want to unblock with △+ or ▽–.

2 Press OK.
The CH and LABEL change to normal colour indicating that the blocking has been cancelled.

If you try to select a programme that has been blocked:
The message "LOCKED" appears on the blank TV screen.

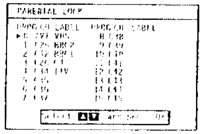


Fig. 27.

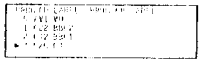
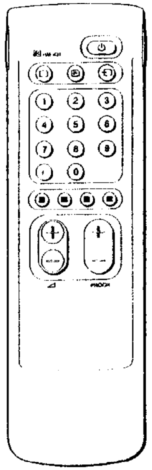


Fig. 28.

Watching the TV



This section explains the basic functions you use while watching TV. Most of the operations can be done using the simple side of the Remote Commander.

Switching the TV on and off

Switching on

Depress ⏻ on the TV.

Switching off temporarily

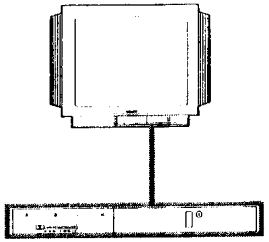
Press ⏻ on the Remote Commander.
The TV enters standby mode and the standby indicator on the front of the TV lights up.

To switch on again

Press ◯, PROGR +/–, or one of the number buttons on the Remote Commander.

Switching off completely

Depress ⏻ on the TV.



Selecting TV Programmes

Press PROGR +/– or press number buttons.

To select a double-digit number

Press -/– –, then the numbers.
For example, if you want to choose 23, press -/– –, 2, and 3.

If no picture appears when you depress ⏻ on the TV

and if the standby indicator on the TV is lit, the TV is in standby mode. Press ◯ or one of the number buttons to switch it on.

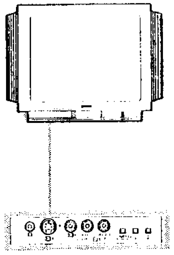
Adjusting the Volume

Press ◢ +/–.

Operating the TV Using the Buttons on the TV

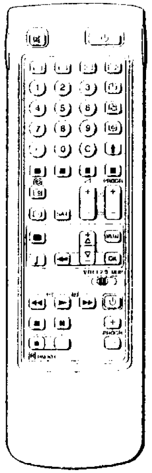
With the buttons on the TV, you can select programmes, adjust the volume, and select video input sources.

- Press ⊡ button repeatedly until the programme number, ◢ (for volume), or ⇥ (for video input picture) appears. Then adjust with the –/+ buttons.
- Press –/+ buttons to switch on the TV from the standby mode.
- Press –/+ simultaneously to reset picture and sound controls to the factory preset level (RESET symbol →•← is displayed).



For details of the teletext operation, refer to page 47.

For details of the video input picture, refer to page 51.



Watching Teletext or Video Input

Watching teletext

- Press ⊜ to view the teletext.
- Press three number buttons to select a page.
- Press one of the coloured buttons for fastext operation.
- Press ⊞ (PAGE +) or ⊟ (PAGE –) for the next or preceeding page.
- To go back to the normal TV picture, press ◯.

Watching a video input picture

Press ⇥ repeatedly until the desired video input appears. To go back to the normal TV picture, press ◯.

Starlight Music mode

When you connect an audio source (e.g. CD player) to ⇥3 of the front and select ⇥3 or ⇥S3, this TV automatically goes into the Starlight Music mode. In this mode, the Graphic Equalizer appears for a while leaving a starlight scene to indicate that the TV is still on.
This mode may appear in other cases when the video signal of ⇥3 or ⇥S3 is absent.

More Convenient Functions

Use the Full-Function side of the Remote Commander.

Displaying the on screen indications

- Press ⊕ once to display all the indications. They will disappear after some seconds.
- Press ⊕ twice to have the programme number and label stay on screen. Press twice again to make indications disappear.

Muting the sound.

Press 🔇.
To resume normal sound, press 🔇 again.

Displaying the time

Press ◷. This function is available only when teletext is broadcast.
To make the time display disappear, press ◷ again.

To make the Programme Table disappear
Press MENU.

Displaying of the Programme Table

Press OK. A Programme Table will be displayed on the right side of the TV screen (See. Fig.29)

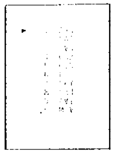


Fig.29.

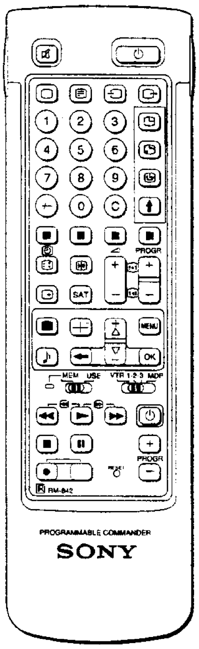
Selecting of TV programmes

Press PROGR +/- or select the desired programme position using ◢+ or ◢– and press OK.

Adjusting and Setting the TV Using the Menu

PICTURE CONTROL

SOUND CONTROL



Adjusting the Picture and Sound

Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste. In addition, you can change the aspect ratio of the TV display for wide screen effect. You can also select dual sound (bilingual) programmes when available or adjust the sound for listening with the headphones (∩) or individually adjust and store the volume level of each channel (Volume offset). Also you have the possibility to adjust the sound to your individual taste using the Graphic Equalizer and special Sound effects.

1 Press ● (for picture) or ♪ (for sound) on the Remote Commander.

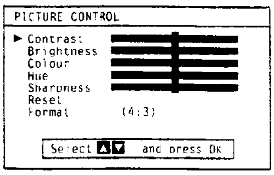
or

Press MENU and select `Picture Control` or `Sound Control`, then press OK.
The `PICTURE CONTROL` or `SOUND CONTROL` menu appears. (See Fig. 30 or Fig. 31)

2 Using △+ or ▽−, select the item you want to adjust and press OK.The selected item changes colour. (See Fig. 32)

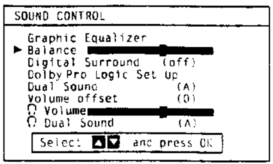
3 Adjust the setting with △+ or ▽ − and press OK.
The cursor appears beside the next item (at the left margin). (See Fig. 33)
For the effect of each control, see the table below.

4 Repeat steps 2 and 3 to adjust other items.



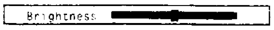
PICTURE CONTROL
▶ Contrast
Brightness
Colour
Hue
Sharpness
Reset
Format (4:3)
Select ▲▼ and press OK

Fig. 30.



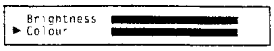
SOUND CONTROL
Graphic Equalizer
▶ Balance
Digital Surround (off)
Dolby Pro Logic Set Up
Dual Sound (A)
Volume offset (0)
∩ Volume
∩ Dual Sound (A)
Select ▲▼ and press OK

Fig. 31.



Brightness

Fig. 32.



Brightness
▶ Colour

Fig. 33.

Effect of each control

PICTURE CONTROL	Effect
Contrast	Less ——I—— More
Brightness	Darker ——I—— Brighter
Colour	Less ——I—— More
Hue	Greenish ——I—— Reddish
Sharpness	Softer ——I—— Sharper
Reset	Resets picture to the factory preset levels.
Format	4:3 Normal 16:9 wide screen effect

SOUND CONTROL	Effect
Graphic Equalizer	(See page 45 for more information)
Balance	More left —I— More right
[Digital] Surround	OFF: Normal ON: Choice among special sound effects: Dolby Pro Logic ➡ Hall ➡ Arena ➡ Dome ↑— OFF ⬅ Simulated (gives width to a ↵ monaural source)
Dolby Pro Logic Set Up	(See page 46)
Dual Sound	A : left channel B : right channel stereo mono The selected mode of the A-⊂⊃-B indicator on the TV lights up.
Volume offset	−7 Less 0 More +7
Headphones:	
∩ Volume	Less —I— More
∩ Dual Sound	A : left channel B : right channel STEREO MONO

If you have made a mistake:
Press ⬅ to go back to the previous position.
To go back to the main menu:
Keep pressing ⬅.
To go back to the normal TV picture:
Press MENU.

Note:
HUE is only available for NTSC colour system.

Note on BALANCE:
Balance control can only be used when Digital Surround is in "OFF" or "Simulated" modes. The level of left and right speaker volume is set using the Dolby Pro Logic set up menu (see page 46).

When watching a video input source with stereo sound:
You can select DUAL SOUND to change the sound.

When watching a programme in dual sound mode:
Digital Surround Mode becomes OFF automatically.

Graphic Equalizer

Note: The modifications made in "USER" mode will be stored. All other settings are reset to factory-set level when you change to another mode.

Using this function you can individually adjust the sound by cutting and boosting selected frequencies. You can also select between the following modes:

Flat ➡ POP ➡ Rock ➡ Jazz ➡ Vocal ➡ User

1 Select `Sound Control` in the main menu, then select `Graphic Equalizer` using △+ or ▽– and press OK. The `GRAPHIC EQUALIZER` menu appears (see Fig. -34).

2 Press OK. The colour of "Mode" changes. Select the desired mode with △+ or ▽– and press OK.

3 If you want to modify a mode, select the desired bar of a frequency band using △+ or ▽– and press OK. The selected bar changes colour. Using △+ or ▽– adjust the level of frequency and press OK. In this way you can adjust all 5 graphic bars.

4 Press MENU to return to the normal TV mode.

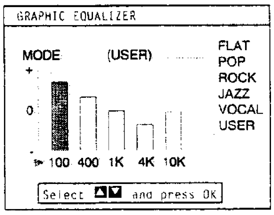


Fig -34.

PROGRAMME TABLE

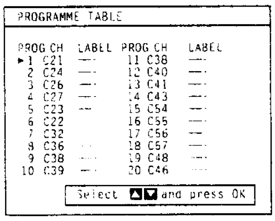
To go back to the normal TV picture:
Press MENU.

Using the Programme Table

On this table, you can see which channel is preset to which programme position. You can also select programmes using this table.

1 From the main menu, select `Programme Table` with △+ or ▽– and press OK.
The `PROGRAMME TABLE` menu appears.
To scroll to higher programme numbers, press ▽–.

2 To select a programme using this menu select the programme number with △+ or ▽– and press OK.
The selected programme appears.



PROG	CH	LABEL	PROG	CH	LABEL
▶1	C21	—	11	C38	—
2	C24	—	12	C40	—
3	C26	—	13	C41	—
4	C27	—	14	C43	—
5	C23	—	15	C54	—
6	C22		16	C55	—
7	C32		17	C56	—
8	C36	—	18	C57	—
9	C38	—	19	C48	—
10	C39	—	20	C46	—

TIMER

To switch off the timer:
Select "OFF" in step 3.

To check the remaining time:
Press ⊙.

Using the Sleep Timer

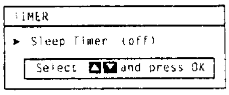
You can select a time period after which the TV automatically switches into standby mode.

1 From the main menu, select `Timer` with △+ or ▽– and press OK.
The `TIMER` menu appears.

2 Press OK.
The time period option changes colour.

3 Select the time period with △+ or ▽–.
The time period (in minutes) changes as follows:
10→20→30→40→50→60→70→80→90
↑———————— OFF ————————┘

4 After selecting the time period, press OK.
The cursor moves back to the left margin and the timer starts counting.
One minute before the TV switches into standby mode, a message is displayed on the screen.



▶ Sleep Timer (off)

Dolby Pro Logic set up

Using this function you can experience panoramic effects of sound. Before starting, connect the enclosed centre speaker and the surround speakers. Or you can use your own speakers (at least 8Ω impedance) instead. (See page 35).

To enjoy the best sound from your TV The Dolby Pro Logic mode should be selected when the source material you are watching is Dolby Surround encoded.

1. Select `Sound Control` in the main menu, then select `Dolby Pro Logic set up` using Δ+ or ∇– and press OK.
   The `Dolby Pro Logic Setup` menu appears. (`Digital Surround` is set to `Dolby Pro Logic` mode automatically). (Fig. 35).
   The following steps 2 to 7 are necessary only when you install the TV and the speakers or change their positions. Once having adjusted the volume in each of the speakers to the same listening level, you can always obtain the best effects at the listening position.
   In other cases, press ∇– and go to step 8.

2. Press OK
   The cursor moves to the position of `L`(Left speaker volume) and a test tone outputs in the left speaker. (Fig.36)
3. Press OK if you want to adjust the volume of `L`, or press repeatedly Δ+ or ∇– to select `C` (Centre speaker). `R` (Right speaker). `S` (Surround speakers) and press OK.
   The selected bar is highlighted.
4. Press Δ+ or ∇– to adjust the volume.
   The highlighted bar changes its height accordingly.
5. Press OK.
   The cursor moves to the next speaker.
6. Repeat steps 3 to 5 to adjust other volumes according to your taste.
7. Press ⬅ to exit `Level Setting`.
8. Press ∇– to select `Centre Mode`.
9. Press OK to change `Centre Mode`.
10. Select the mode using Δ+ or ∇– and press OK.
    Normal: The centre speaker is active. Normally select this mode when the centre speaker is connected.
    Phantom: If you are unable to connect the centre speaker, select this mode. No sound comes from the centre channel and the left and right speakers compensate creating a "phantom" centre image.
11. Press MENU to return to the normal screen.

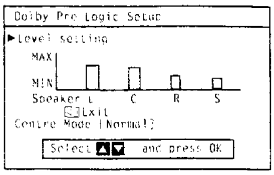


Fig. 35.

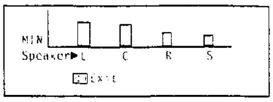
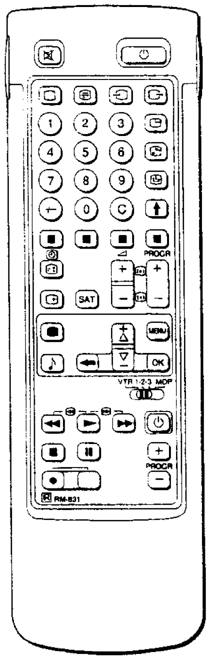


Fig. 36.

Teletext



TV stations broadcast an information service called Teletext via the TV channels. Teletext service allows you to receive various information pages such as weather reports or news at any time you want. For advanced teletext operation, use the buttons on the Full-Function side of the Remote Commander.

Direct Access Functions

Switching Teletext on and off

1 Select the TV channel which carries the teletext broadcast you want to watch.

2 Press ⊜ to switch on teletext.
A teletext page will be displayed (usually the index page).If there is no teletext broadcast, "No text available" is displayed on the information line at the top of the screen.

To switch teletext off

Press ○.

Selecting a teletext page

With direct page selection

Use the number buttons to input the three digits of the chosen page number.
If you have made a mistake, type in any three digits. Then re-enter the correct page number.

Note:
Teletext errors may occur if the broadcasting signals are weak.

With the simple side of the Remote Commander:
You can switch teletext on and off, operate Fastext, and directly select page numbers.

With page-catching

1 Select a teletext page with a page overview (e.g. index page).

2 Press OK. Using △+ or ▽–, select the desired page. "Page Catching" will be displayed on the information line. Press OK. The requested page will appear in a few seconds.

Press ⊜ to resume normal teletext reception.

Accessing next or preceding page

Press ⊜ (PAGE +) or ⊜ (PAGE –).
The next or preceding page appears.

Superimposing the teletext display on the TV programme

- Press ⊜ once in teletext mode or twice in TV mode.
- Press ⊜ again to resume normal teletext reception.

Preventing a teletext page from being updated

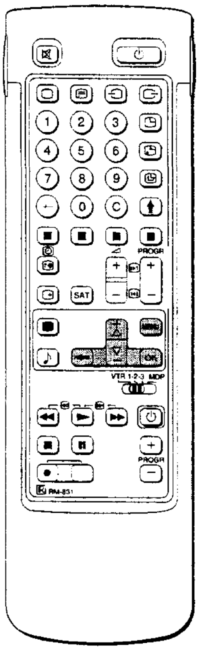
- Press ⊜ (HOLD). The HOLD symbol "⊜" is displayed on the information line.
- Press ⊜ to resume normal teletext reception.

Using Fastext

Note:
Fastext operation is only possible, if the TV station broadcasts Fastext signals.

With Fastext you can access pages with one key stroke.When a Fastext page is broadcast, a colour-coded menu will appear at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue buttons on the Remote Commander.
Press the corresponding coloured button on the Remote Commander which corresponds to the colour-coded menu. The page will be displayed after some seconds.

Using the Teletext Menu



This TV is provided with a menu-guided teletext system. When teletext is switched on, you can use the menu buttons to operate the teletext menu. Select the teletext menu functions in the following way:

1 Press MENU. The menu will be superimposed on the teletext display. (See Fig. 37)

2 Using △+ or ▽–, select the teletext function you want and press OK. (See Fig. 38)

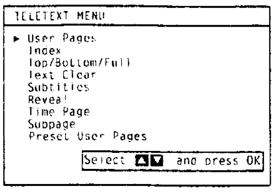

TELETEXT MENU
► User Pages
Index
Top/Bottom/Full
Text Clear
Subtitles
Reveal
Time Page
Subpage
Preset User Pages
Select ▲▼ and press OK

Fig. 37.

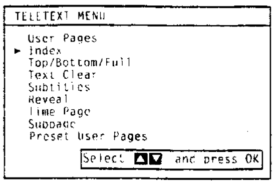

TELETEXT MENU
User Pages
► Index
Top/Bottom/Full
Text Clear
Subtitles
Reveal
Time Page
Subpage
Preset User Pages
Select ▲▼ and press OK

Fig. 38.

USER PAGES/PRESET USER PAGES

See page 49 for information about presetting and operating the user pages.

INDEX

The index will give you an overview of the contents of the teletext and the page numbers.

TOP/BOTTOM/FULL

For convenient reading of a teletext page, you can enlarge the teletext display with the ability to scroll up and down the screen. After having selected the function, an information line `Top/Bottom/Full` will be displayed. (See Fig. 39)

Press △+ for `Top` to enlarge the upper half. For `Bottom` keep pressing ▽–, to enlarge the lower half. Press OK for `Full` to resume the normal size.

Press ⊜ to resume normal teletext reception.

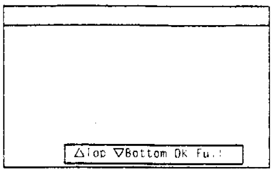

△Top ▽Bottom OK Full

Fig. 39.

Note:
Some of the features may not be available depending on the Teletext service.

TEXT CLEAR

After having selected the function, you can watch a TV programme while waiting for a requested teletext page to be captured (The symbol changes colour) (see Fig. 40).

Press ⊜ to view the requested page.

Fig. 40.

SUBTITLES

Your teletext service will inform you if a TV programme is subtitled. After having selected the function the subtitles will be displayed.

Note on Subtitles:
If the subtitles are not broadcast on page 888, please select the subtitle page using the number buttons.

REVEAL

Sometimes pages contain concealed information, such as answers to a quiz. The reveal option lets you disclose the information. After having selected the function, an information line "REVEAL ON/OFF" will be displayed. (See Fig. 41)

Using △+ or ▽–, select ON to reveal the information or OFF to conceal it again.

Press ⊜ to resume normal teletext reception.

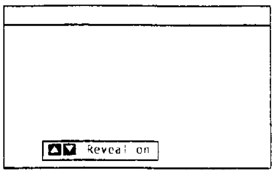


Fig. 41.

TIME PAGE

Your teletext service will inform you, if a time coded page is available. You may have a page (e.g. an alarm page) displayed at a certain time.

1 Press OK, using △+ or ▽–, select ON and press OK.

2 To select the desired page, enter the three digits of the page number using the number buttons.

3 To select the desired time, enter four digits for the desired time (e.g. 1800) using the number buttons. Press MENU. The selected time is displayed at the top in the left-handed corner. At the requested time, the page will be displayed.

To cancel the request:
Select "OFF" for the TIME PAGE setting.

To cancel the request:
Select "Subpage" and press OK.

SUBPAGE

You may want to select a particular teletext page from several subpages which are rotated automatically. After having selected the function, an information line will be displayed.

To select the desired subpage, enter four digits using PROGR+/– or the number buttons. (e.g. enter 0002 for the second page of a sequence).

If two broadcasting stations use the same Teletext:
You can preset one bank to 2 different programme positions.

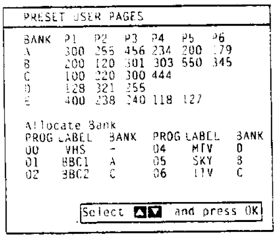
User Page Bank System

You can store up to 30 pages in the "Teletext page bank system". In this way you have quick access to the pages you watch frequently.

Storing pages

There are 5 "banks" (A to E) for 5 teletext stations. In each bank you can store 6 preferred pages (P1 to P6).

1. Press ⊜ (if Teletext is not on already) and MENU to show the TELETEXT MENU display.
2. Select `PRESET USER PAGES` with △+ or ▽– and press OK.
3. Select the desired bank with △+ or ▽– and press OK. The cursor will go to the first position (P1) of the preferred pages.
4. Input the three digits of your first preferred page with the number buttons and press OK.
   The cursor will go to the second position.
5. Repeat step 4 for the other 5 page numbers you want to preset. If you do not want to preset all 6 page numbers available, press OK without inserting any number. After having finished the presetting press OK repeatedly until the cursor appears besides the next bank at the left margin.
6. Select `Allocate Bank` with △+ or ▽– and press OK.
7. Select the programme position for which you have preset pages with △+ or ▽– and press OK. (See Fig. 42)
8. Select the desired bank with △+ or ▽– (Banks A to E are available) and press OK.
9. Repeat steps 3 to 8 for the other 4 banks available.



```
PRESET USER PAGES
BANK   P1   P2   P3   P4   P5   P6
A      300  255  456  234  200  179
B      200  120  301  303  550  345
C      100  220  300  444
D      128  321  255
E      400  238  240  118  127

Allocate Bank
PROG LABEL   BANK    PROG LABEL   BANK
00    VHS     -      04    MTV     D
01    BBC1    A      05    SKY     B
02    BBC2    C      06    ITV     C

              Select ▲▼  and press OK
```

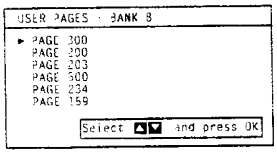
Fig.42.

Displaying User Pages

1. Select MENU.
2. Select `User Pages` with △+ or ▽– and press OK.
   A table of the stored preferred pages will be displayed.
   (See Fig. 43)
3. Select the desired page with △+ or ▽– and press OK. The page will be displayed after some seconds.

   You can use the coloured buttons on the Remote Commander to have quick access to the first four User pages. Page 1 corresponds to the red button, P 2 to the green one, P 3 to the yellow one and P 4 to the blue button.

   To select the desired page press the respective coloured button while you are in TV mode. Now the Page number of this teletext page will appear in white at the top in the left-handed corner of the TV screen. When the page number changes colour, the page is available. Press the coloured button again to display the page.



```
USER PAGES · BANK B
▶ PAGE 300
  PAGE 200
  PAGE 203
  PAGE 500
  PAGE 234
  PAGE 159
          Select ▲▼  and press OK
```

Fig. 43.

Connecting and Operating Optional Equipment

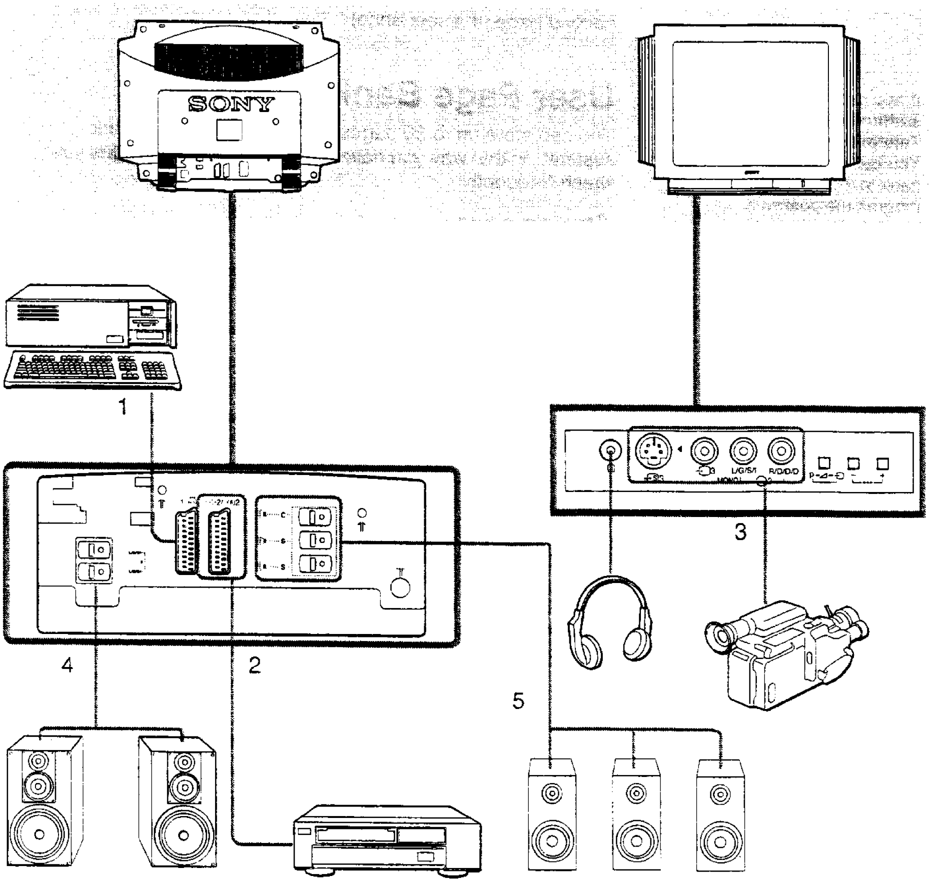
Connecting Optional Equipment

You can connect optional audio-video equipment to this TV such as VCRs, video disc players, and stereo systems.

To connect a VCR using the ⊤ terminal: Connect the aerial output of the VCR to the aerial terminal ⊤ of the TV.

We recommend that you tune in the signal to programme number "0". For details see "Preset Channels Manually" on page 37.

If the picture or the sound is distorted: Move the VCR away from the TV.



S video input (Y/C input): Video signals may be separated into Y (luminance or brightness) and C (chrominance) signals. Separating the Y and C signals prevents them from interfering with one another, and therefore improves picture quality (especially luminance). This TV is equipped with 2 S Video input jacks through which these separated signals can be input directly.

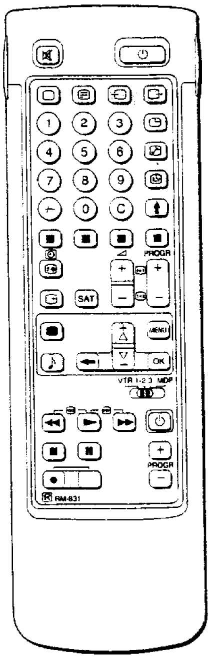
When connecting a monaural VTR: Connect only the white -⊙ jack to both the TV and VCR.

Acceptable input signal	Available output signal
1 Normal audio/video and RGB signal	Video/audio from TV tuner
2 Normal audio/video and S video signal	Video/audio from selected source
3 Normal audio/video and S video signal	No outputs
4 No inputs	Audio signal (variable)
5 No inputs	Audio signal (variable)

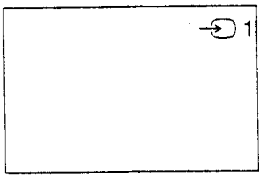
Selecting input and output

This section explains how to view the video input picture (of the video source connected to your TV), and how to select the output signal using direct access buttons or the menu system.

Selecting input with PROGR +/– or number buttons
You can preset video input sources to the programme positions so that you can select them with PROGR +/– or number buttons.
For details, see "Preset channels manually" on page 37.



Selecting input



Press →⊃ repeatedly to select the input source.

The symbol of the selected input source will appear.

To go back to the normal TV picture

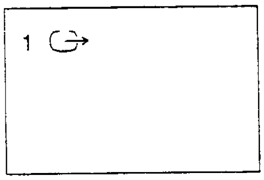
Press ○.

Input modes

Symbol	Input signal
→⊃ 1	Audio/video input through the →⊃ 1 connector
→⊃	RGB input through the →⊃ 1 connector
→⊃ 2	Audio/video input through the ⊂→2/→Ⓢ2 connector
→Ⓢ 2	S video input through the ⊂→2/→Ⓢ2 connector
→⊃ 3	Audio/video input through →⊃3 and →⊃3 on the front
→Ⓢ 3	S video input through the →Ⓢ3 connectors on the front (4-pin connector)

You can also select the input mode using the P→⊿→⊃ and –/+ buttons on the TV. In this case, first select →⊃, and then press –/+ buttons to select the input.

Selecting the output



The ⊂→2/→Ⓢ2 connector outputs the source input from the other connectors.

Press ⊂→ repeatedly to select the output.
The symbol of the selected output source appears.

Output modes

Symbol	⊂→2/→Ⓢ2 connector outputs
1 ⊂→	The audio/video signal from the →⊃ 1 connector
2 ⊂→	The audio/video signal from the ⊂→2/→Ⓢ2 connector
2 Ⓢ→	The audio/S video signal from the ⊂→2/→Ⓢ connector
3 ⊂→	The audio/video signal from the →⊃3, →⊃3 connectors
3 Ⓢ→	The audio/S video signal from the →Ⓢ3, →⊃3 connectors
TV⊂→	The audio/video signal from the ⫞ aerial terminal

Checking and selecting the input and output sources using the menu

You can display the menu to see which input sources are selected for the TV screen, and which output source is selected. You can also select them on the menu display.

1 Select `Video Connection` with △+ or ▽– and press OK. The `VIDEO CONNECTION` menu appears. (See Fig. 44)

You can see which source is selected for the TV and for the output. If you want to select the input and output on this menu, go on to the next step.

2 Select TV Screen (input source for the TV screen) or output (output source) with △+ or ▽– and press OK. One of the source items changes colour. (See Fig. 45)

3 Select the desired source with △+ or ▽–.
(See Fig. 46)
For details about each source, see the table on page 51.

4 Press OK.

The selected source is confirmed, and the cursor appears. (See Fig. 47)

5 Repeat steps 2 to 4 to select the source for other inputs or outputs.

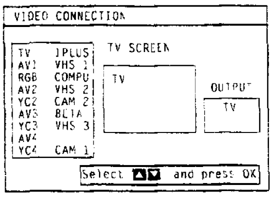

VIDEO CONNECTION
TV 1PLUS
AV1 VHS 1
RGB COMPU
AV2 VHS 2
YC2 CAM 2
AV3 BETA
YC3 VHS 3
AV4
YC4 CAM 1
TV SCREEN
TV
OUTPUT
TV
Select ▲▼ and press OK

Fig. 44.

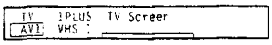

TV 1PLUS
AV1 VHS 1
TV Screen

Fig. 45.

AV2 VHS 2
YC2 CAM 2
TV
OUTPUT
TV

Fig. 46.

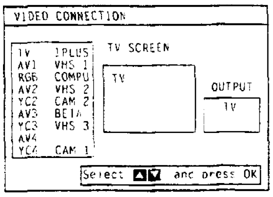

VIDEO CONNECTION
TV 1PLUS
AV1 VHS 1
RGB COMPU
AV2 VHS 2
YC2 CAM 2
AV3 BETA
YC3 VHS 3
AV4
YC4 CAM 1
TV SCREEN
TV
OUTPUT
TV
Select ▲▼ and press OK

Fig. 47.

Remote Control of Other Sony Equipment

You can use the TV Remote Commander to control most Sony remote-controlled video equipment such as: Beta, 8mm or VHS VCRs or video disc players.

Tuning the Remote Commander to the equipment

1 Set the VTR 1/2/3 MDP selector according to the equipment you want to control:

VTR 1: Beta VCR

VTR 2: 8mm VCR

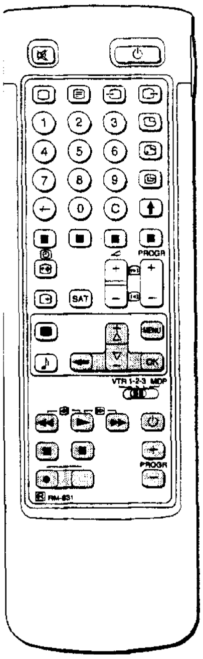
VTR 3: VHS VCR

MDP: Video disc player

2 Use the buttons indicated in the illustration to operate the additional equipment.

If your video equipment is furnished with a COMMAND MODE selector: set this selector to the same position as the VTR 1/2/3 MDP selector on the TV Remote Commander.

If the equipment does not have a certain function, the corresponding button on the Remote Commander will not operate.


PROGR
SAT
MENU
OK
VTR 1·2·3 MDP
PROGR

When recording
When you use the ● (record) button, make sure to press this button and the one to the right of it simultaneously.

For Your Information

Troubleshooting

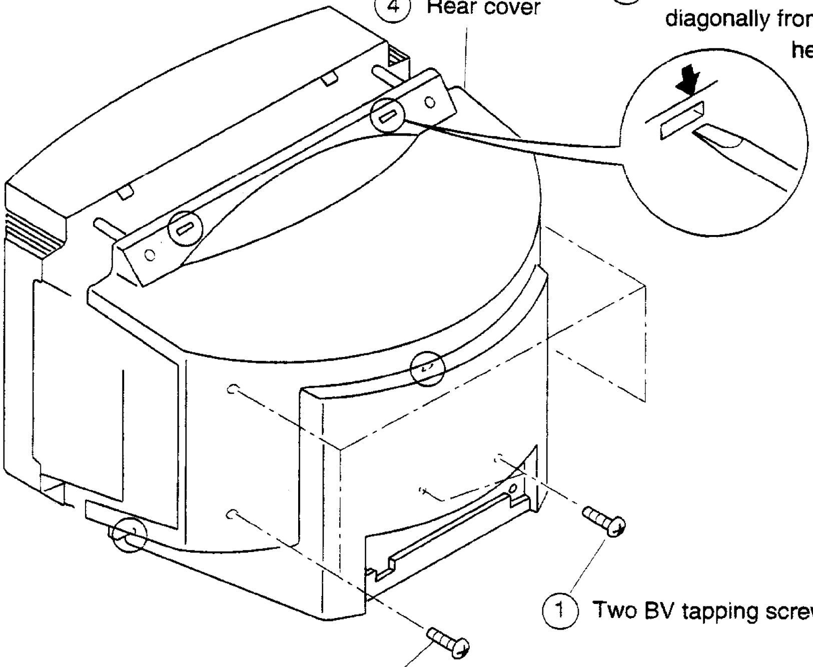
Here are some simple solutions to problems which may affect the picture and sound.

Problem	Solution
No picture (screen is dark), no sound	• Plug the TV in. • Press ⏻ on the TV. (If ⏻ indicator is on, press ▢ or a programme number on the Remote Commander.) • Check the aerial connection. • Check if the selected video source is on. • Turn the TV off for 3 or 4 seconds and then turn it on again using ⏻ .
Poor or no picture (screen is dark), but good sound	• Press ● to enter the PICTURE CONTROL menu and adjust BRIGHTNESS, CONTRAST and COLOUR.
Poor picture quality when watching an RGB video source	• Press ⇥ repeatedly to select ⇥.
Good picture but no sound	• Press ◺ +. • If 🔇 is displayed on the screen, press 🔇.
No colour for colour programmes	• Press ● to enter the PICTURE CONTROL menu, select RESET, then press OK.
Remote Commander does not function.	• Replace battery.

If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.

SECTION 2
DISASSEMBLY

2-1. REAR COVER REMOVAL



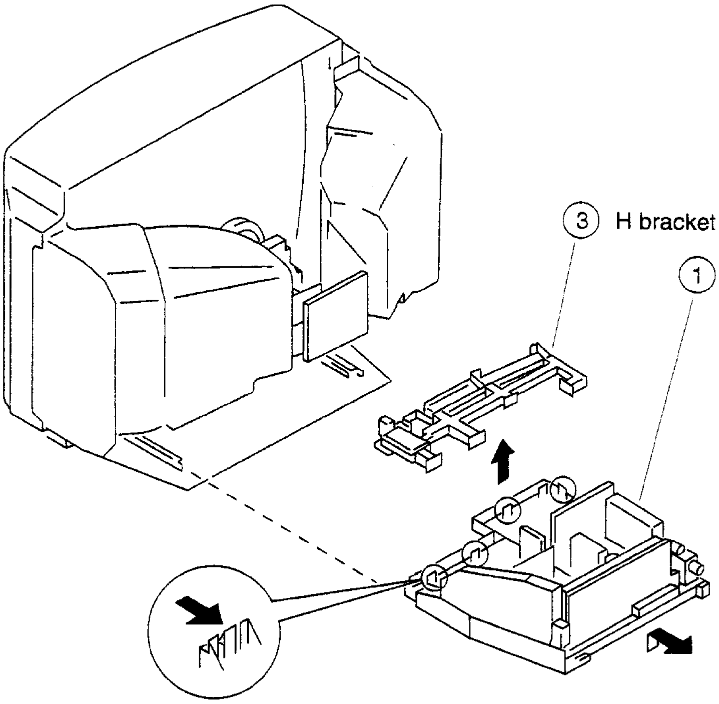
④ Rear cover

③ Release the four claws by pushing diagonally from above using a flat head screwdriver.

① Two BV tapping screw (BVTP4x16)

② Four BV tapping screws (BVTP4x16)

2-2. CHASSIS ASSY REMOVAL

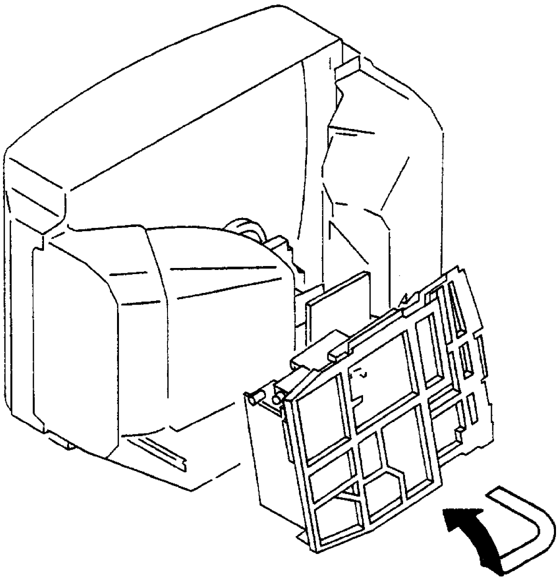


③ H bracket

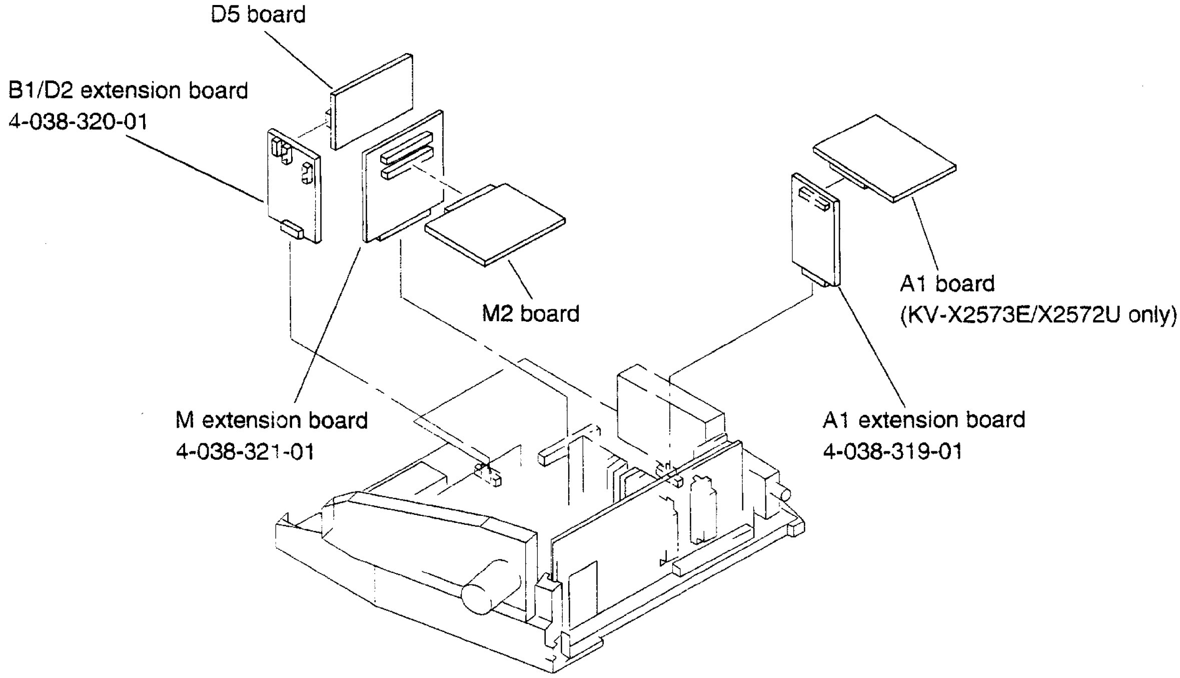
① After the assembly of the main chassis, lift and pull out the rear part of the main chassis towards the rear.

② Push the four claws of the main chassis in the direction of the arrow and remove the H bracket upwards.

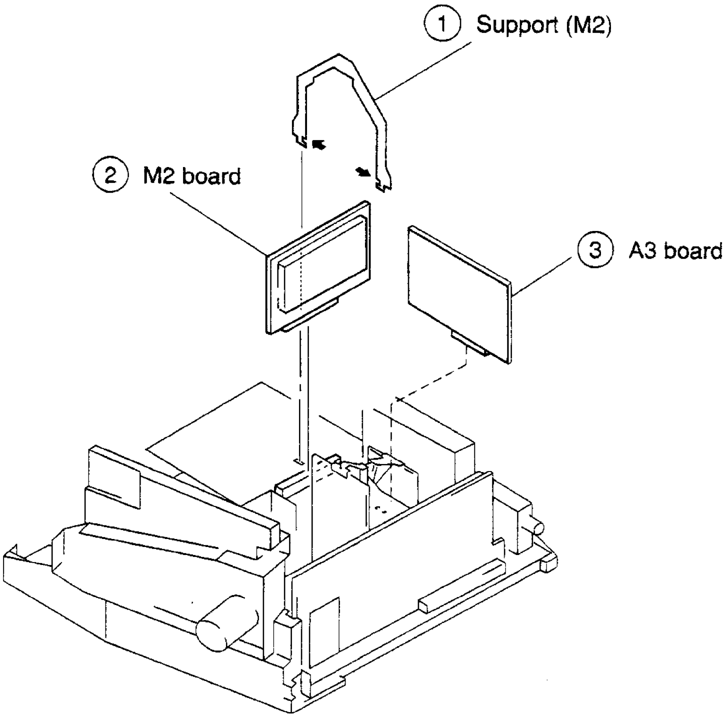
2-3. SERVICE POSITION



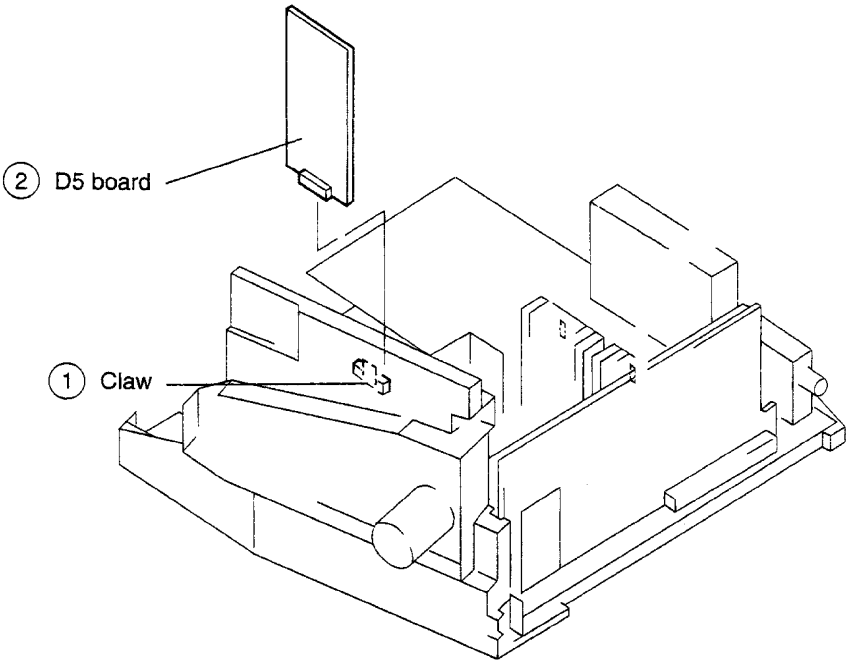
2-4. EXTENSION BOARDS


D5 board
B1/D2 extension board
4-038-320-01
M2 board
A1 board
(KV-X2573E/X2572U only)
M extension board
4-038-321-01
A1 extension board
4-038-319-01

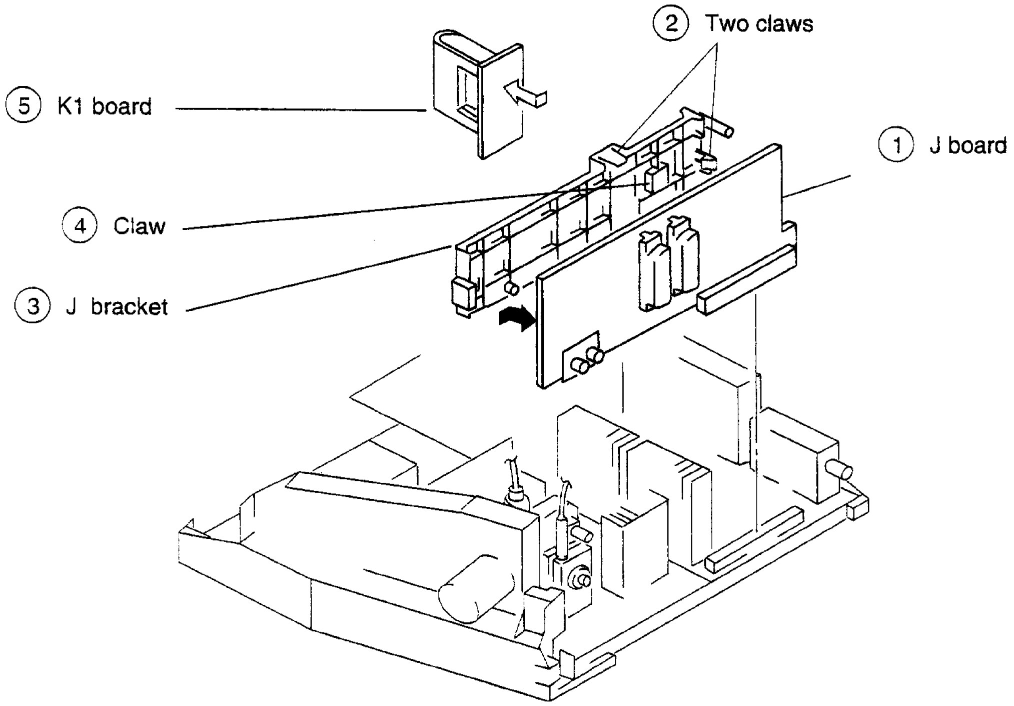
2-5. M2 AND A3 BOARD REMOVAL


① Support (M2)
② M2 board
③ A3 board

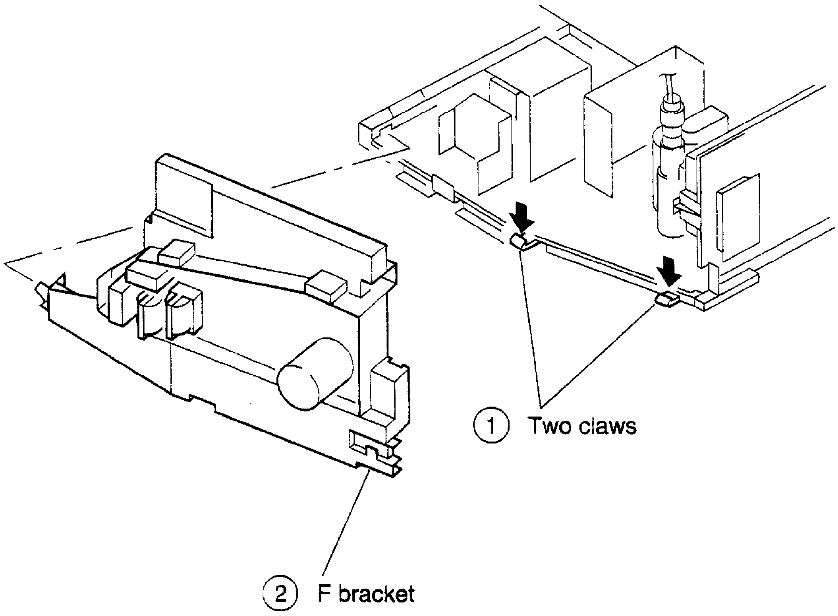
2-6. D5 BOARD REMOVAL


② D5 board
① Claw

2-7. J AND K1 BOARD REMOVAL

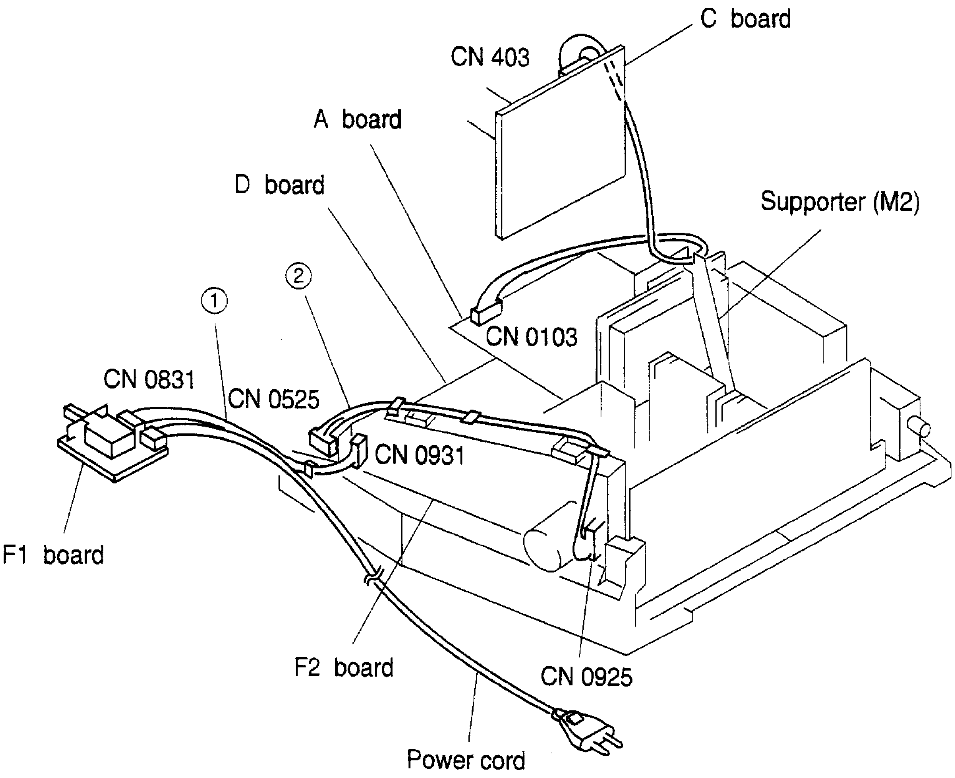

② Two claws
⑤ K1 board
① J board
④ Claw
③ J bracket

2-8. F BRACKET REMOVAL

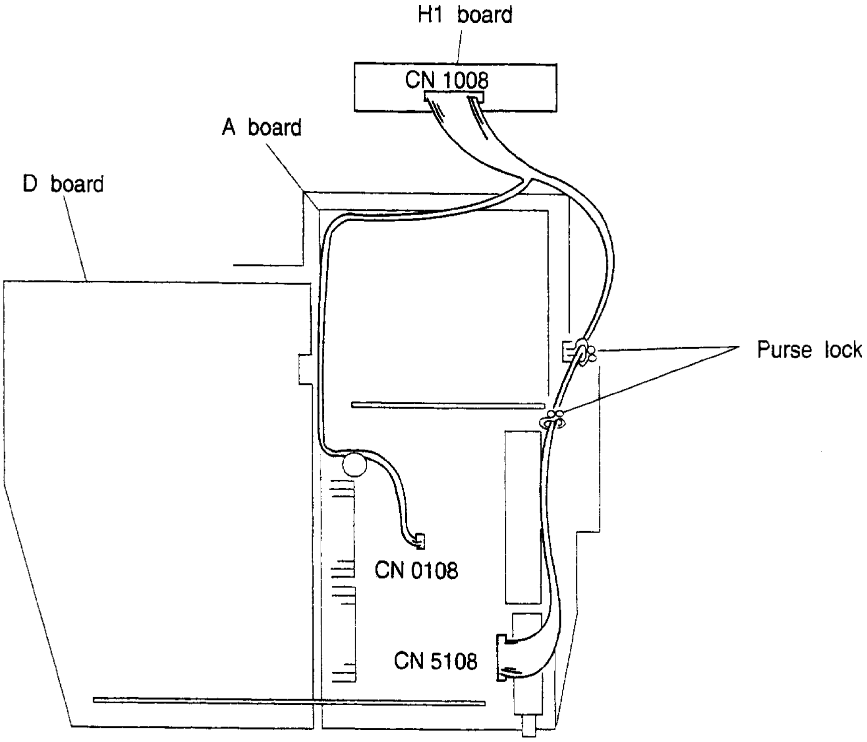

① Two claws
② F bracket

2-9-1. WIRE DRESSING

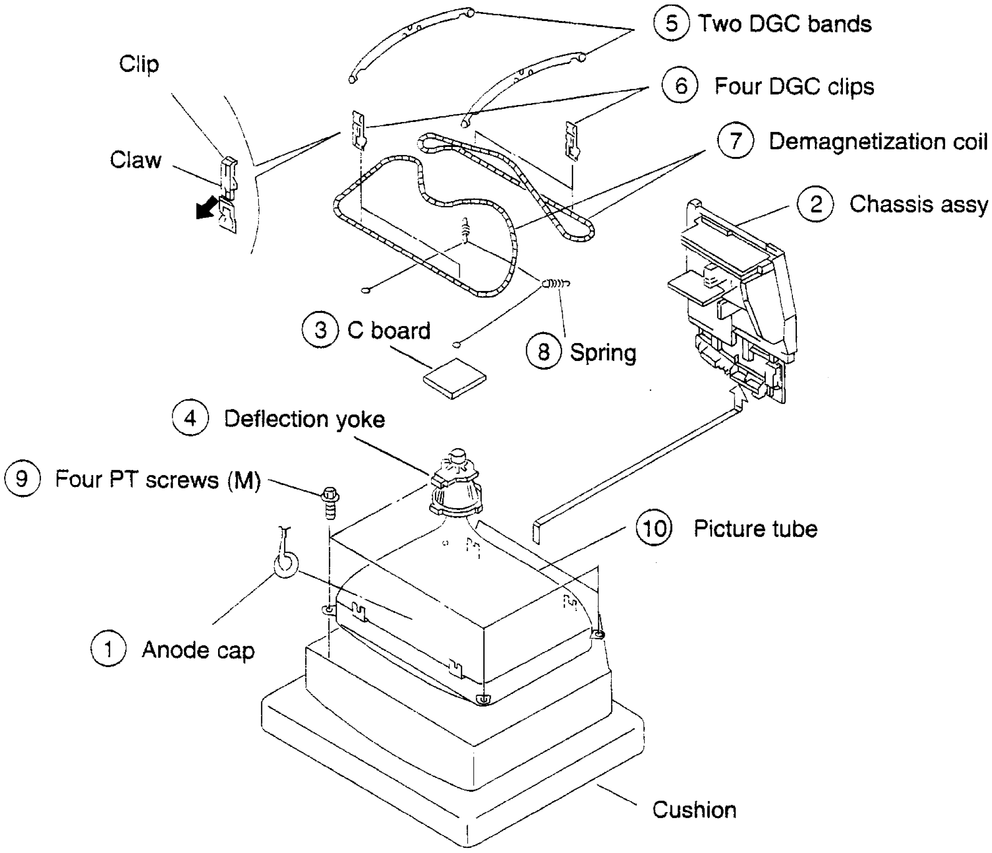
* Keep distance between ① and ②


C board
CN 403
A board
D board
Supporter (M2)
②
①
CN 0103
CN 0831
CN 0525
CN 0931
F1 board
F2 board
CN 0925
Power cord

2-9-2. WIRE DRESSING


H1 board
CN 1008
A board
D board
Purse lock
CN 0108
CN 5108

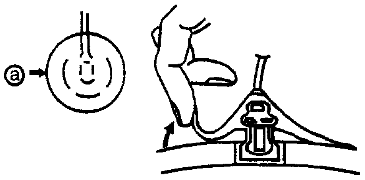
2-10. PICTURE TUBE REMOVAL


⑤ Two DGC bands
Clip
⑥ Four DGC clips
⑦ Demagnetization coil
Claw
② Chassis assy
③ C board
⑧ Spring
④ Deflection yoke
⑨ Four PT screws (M)
⑩ Picture tube
① Anode cap
Cushion

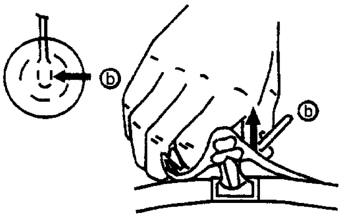
• REMOVAL OF ANODE-CAP

Note: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

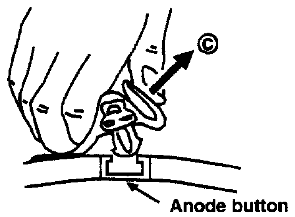
*** REMOVING PROCEDURES.**



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ



② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ


ⓒ
Anode button

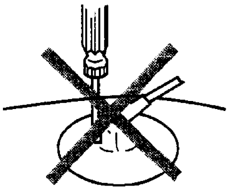
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ

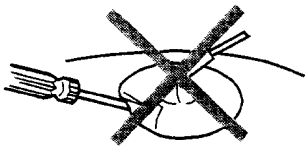
- **HOW TO HANDLE AN ANODE-CAP**

① Don't damage the surface of anode-cap with sharp shaped material !

② Don't press the rubber hardly not to hurt inside of anode-caps !
A metal fitting called as shatter-hook terminal is built into the rubber.

③ Don't turn the foot of rubber over hardly !
The shatter-hook terminal will stick out or damage the rubber.





SECTION 3
SET-UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there is specific instruction to the contrary, carry out these adjustments with the rated power supply.
- Unless there is specific instruction to the contrary, set the controls and switches this way :

◑ Contrast .... 80% (or remote control normal)

☼ Brightness 50%

- Carry out the following adjustments in this order :

1. Beam landing
2. Convergence
3. Focus
4. White balance

Note: Testing equipment required.

1. Color bar/pattern generator
2. Degausser
3. DC power supply
4. Digital multimeter
5. Oscilloscope

Preparations:

- In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.
- Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

1. Input the white signal with the pattern generator.
   Contrast } normal
   Brightness }
2. Position neck assy as shown in Fig.3-2.
3. Set the pattern generator raster signal to red.
4. Move the deflection yoke to the rear and adjust with the purity control so that the red is at the center and the blue and the green take up equally sized areas on each side. (See Fig.3-1 - 3-3)
5. Move the deflection yoke forward and adjust so that entire screen is red. (See Fig.3-1)
6. Switch the raster signal to blue, then to green and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Fig.3-4)

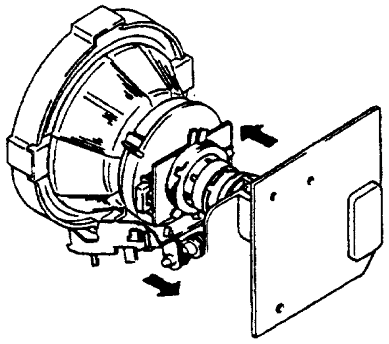


Fig.3-1

Fig.3-2

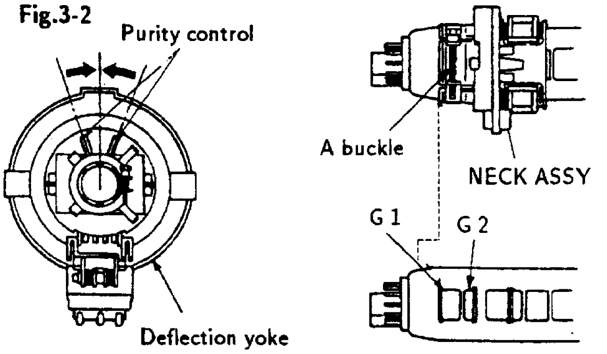
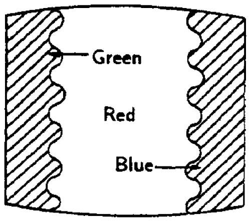

Purity control
A buckle
NECK ASSY
G 1
G 2
Deflection yoke

Fig.3-3


Green
Red
Blue

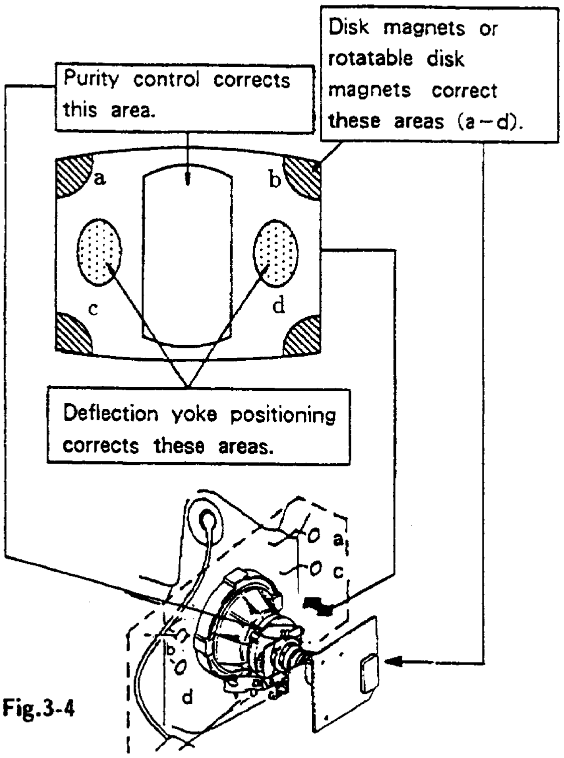

Disk magnets or rotatable disk magnets correct these areas (a−d).
Purity control corrects this area.
a
b
c
d
Deflection yoke positioning corrects these areas.
a
c
b
d

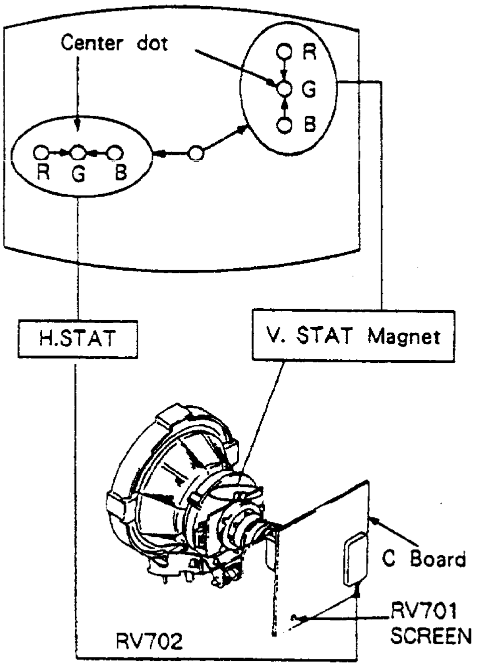
Fig.3-4

3-2. CONVERGENCE

Preparations :

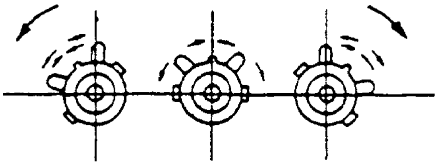
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide dot pattern.

(1) Horizontal and vertical static convergence



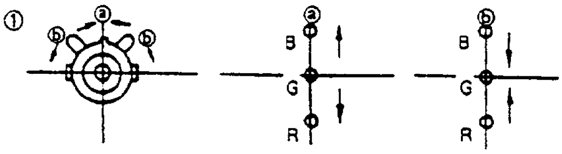
1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V. STAT magnet in the manner given below.
   (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.

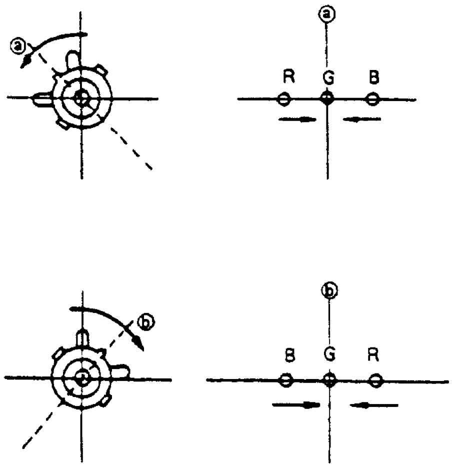


4. If the V.STAT magnet is moved in the direction of the ⓐ and ⓑ arrows, the red, green, and blue points move as shown below.

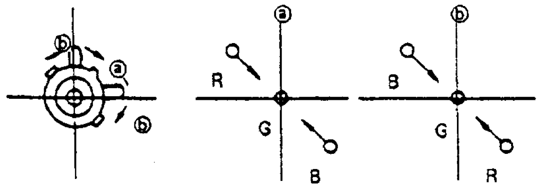
①



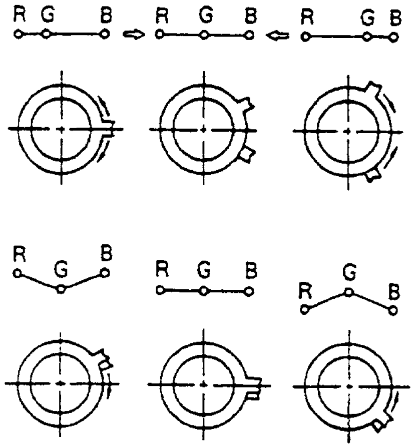
②



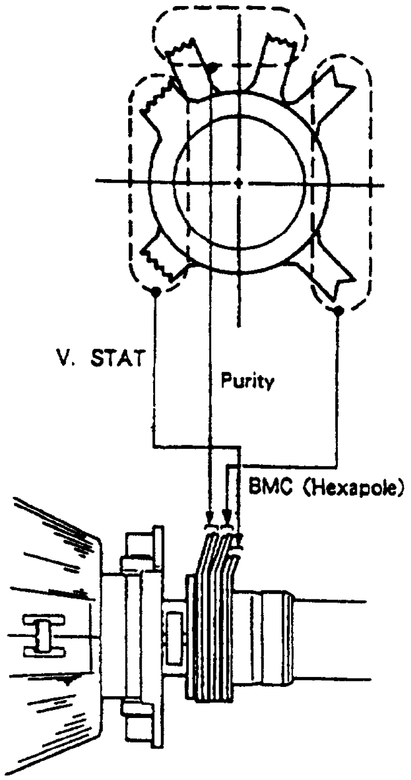
③



- Operation of BMC (Hexapole) Magnet


R G B
R G B
R G B
R G B
R G B
R G B

- The respective dot positions resulting from moving each magnet interact, so be sure to perform adjustment while tracking.
  Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction).

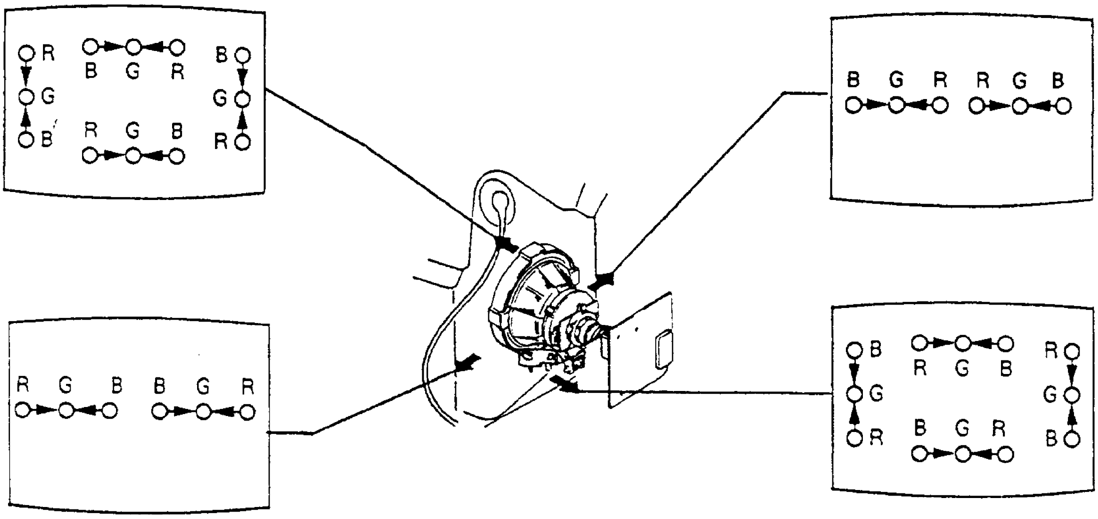

V. STAT
Purity
BMC (Hexapole)

(2)Dynamic convergence adjustment

Preparations :

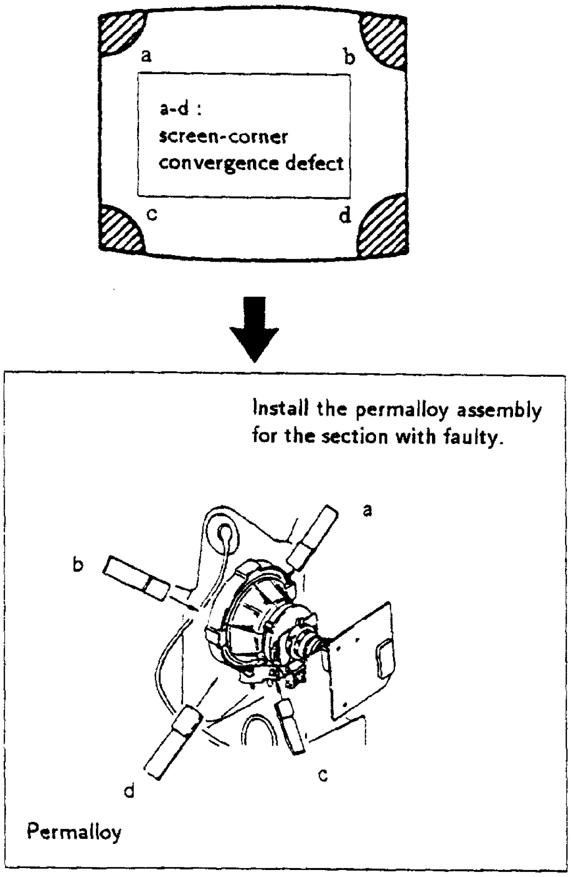
- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.

1. Slightly loosen the deflection yoke screws.
2. Remove the deflection yoke spacer.
3. Move the deflection yoke as shown in the figure below and optimize the convergence.
4. Tighten the deflection yoke screws.
5. Install the deflection yoke spacer.


R G B
B G R
R G B
B G R
B G R R G B
R G B B G R
B G R
R G B
B G R
R G B
B G R

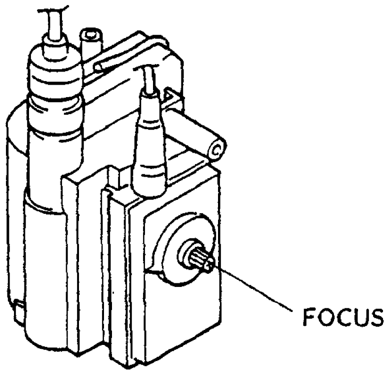
(3) Screen corner convergence

If you cannot adjust corner convergence properly, correct them with permalloy.



3-3. FOCUS

Adjust the focus to optimize the screen.



3-4. WHITE BALANCE

Screen G2 Setting

1. Input the dot signal from the pattern generator.
2. Set the picture brightness control to its lowest level.
3. Apply 180V DC to the R,G, and B cathodes with an external power supply.
4. While watching the picture, adjust G 2 control RV 701 (Screen) to the point just before the return lines disappear.

White balance adjustment

1. Receive all-white signal.
2. Enter into service mode. (Refer to the section 4 "Electrical Adjustment" to how to enter service mode.)
3. Select CXA1587S on menu.

09	SUB BRIGHT	ADJ.
10	SUB HUE	7
11	VM LEVEL	2
12	NR LEVEL	0
13	ABL MODE	0
14	G-DRIVE	ADJ.
15	B-DRIVE	ADJ.
16	G-AUTO CUT OFF	ADJ.
17	B-AUTO CUT OFF	ADJ.
18	R-MANUAL CUT OFF	ADJ.
19	G-MANUAL CUT OFF	ADJ.
20	B-MANUAL CUT OFF	ADJ.

4. Set picture to MAX.
5. Adjust G-DRIVE B-DRIVE with ▲, ▼ buttons so that the white balance becomes optimum.
6. Press OK button to write the data for each item.
7. Set picture to MIN.
8. Adjust G-AUTO CUT OFF, B-AUTO CUT OFF, R-MANUAL CUT OFF, G-MANUAL CUT OFF and B-MANUAL CUT OFF with ▲, ▼ buttons so that the white balance becomes optimum.
9. Press OK button to write the data for each item.

SECTION 4
CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander RM-831

HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set while pressing any two buttons on the front panel.

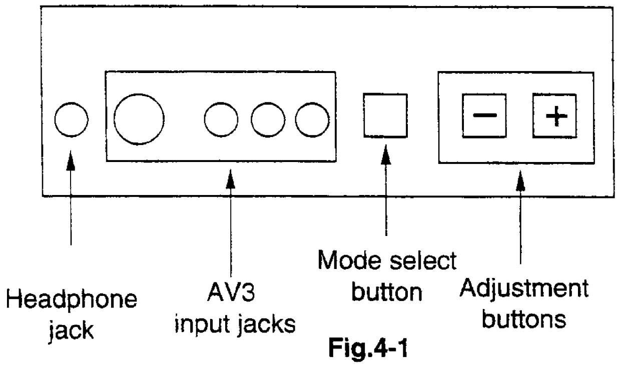

Headphone jack
AV3 input jacks
Mode select button
Adjustment buttons

Fig.4-1

2. "TT" will appear at the upper right corner of the screen.

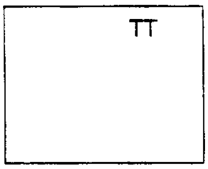


Fig.4-2

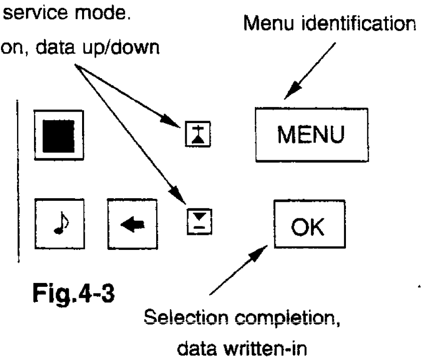

Command operation in service mode.
Item selection, data up/down
Menu identification
MENU
OK
Selection completion, data written-in

Fig.4-3

3. Press the MENU button on the remote commander to obtain the menu on the screen.

MAIN MENU
Programme Table
Video Connection
Picture Control
Sound Control
Timer
Preset
Language
> DEMO
Select < > and press OK

Fig.4-4

4. Press the ▲ and ▼ buttons on the remote commander and move [>] to DEMO.
5. Press [OK] button to proceed to the next menu.
6. The menu of fig. 4-5 will appear on the screen. Select the DEVICE corresponding to the adjustment item from the table on the next page.

DEVICES
Initialize
> CXA1587
CXD2018
TDA9145
CXA1526
TDA6612
CX7948A
P/P service
Select < > and press OK

Fig. 4-5

7. If adjustment item is CXA1587, press the ▼ button and move > to CXA1587.

CXA1587

	Item No	Adjustment item	Data Amount
	01	PICTURE	53
	02	COLOR	31
	03	BRIGHT	31
	04	HUE	31
	05	SHARPNESS	12
	06	RGB PICTURE	7
	07	SUB CONTRAST	ADJ.
	08	SUB COLOR	ADJ.
>	09	SUB BRIGHT	ADJ.
	10	SUB HUE	8
	11	VM LEVEL	2
	12	NR LEVEL	0
	13	ABL MODE	0
	14	G-DRIVE	ADJ.
	15	B-DRIVE	ADJ.

8. Press [OK] button to get the next selection menu.
9. Press ▼ button and move [>] to the adjustment item and press [OK] button.
10. Press ▲ and ▼ buttons to change the data in order to comply with each standard.
11. Press [OK] button to write data.
12. Turn off the power to quit service mode when adjustments are completed.

CXA1587

Item No	Adjustment item.	Data Amount
01	PICTURE	53
02	COLOR	31
03	BRIGHT	31
04	HUE	31
05	SHARPNESS	12
06	RGB PICTURE	7
07	SUB CONTRAST	ADJ.
08	SUB COLOR	ADJ.
09	SUB BRIGHT	ADJ.
10	SUB HUE	8
11	VM LEVEL	2
12	NR LEVEL	0
13	ABL MODE	0
14	G-DRIVE	ADJ.
15	B-DRIVE	ADJ.
16	G-AUTO CUT OFF	ADJ.
17	B-AUTO CUT OFF	ADJ.
18	R-MANUAL CUT OFF	ADJ.
19	G-MANUAL CUT OFF	ADJ.
20	B-MANUAL CUT OFF	ADJ.
21	GAMMA LEVEL	8
22	DC TRANSFER RATIO	3
23	DYNAMIC PICTURE	2
24	Y FILTER ADJ	ADJ.
25	Y DELAY TIME	15
26	Y DELAY SWITCH 1	0
27	Y DELAY SWITCH 2	1
28	SHARPNESS LIMIT	ON
29	TRAP	OFF
30	H SHIFT	36
31	DA TEST	ON
32	PRE/OVER	12
33	SUB FOCUS	2
34	SUB SHARPNESS	3
35	R MUTE	OFF
36	G MUTE	OFF
37	B MUTE	OFF
38	AGING 1 WHT	OFF
39	AGING 2 BLK	ON
40	AKB OFF	ON
41	INHIBIT RGB	ON
42	FORCED RGB	OFF
43	V/2 V	OFF
44	AXIS	PAL
45	HUE OFF	OFF
46	V EXTENSION	OFF
47	AFC 1	1
48	AFC 2	0
49	AFC	OFF

CXD2018

Item No	Adjustment item.	Data Amount
01	V SIZE	ADJ.
02	V SHIFT	ADJ.
03	S CORRECTION	ADJ.
04	V LINEARITY	ADJ.
05	H SIZE	ADJ.
06	PIN AMP	ADJ.
07	TILT	ADJ.
08	UPPER CORNER	ADJ.
09	LOWER CORNER	ADJ.
10	V BOW	ADJ.
11	ANGLE	ADJ.
12	HV COMP. V	12
13	HV COMP. H	8
14	FRAME SHIFT	OFF
15	FREE RUN 60 Hz	OFF
16	SYSTEM 60 Hz	OFF
17	ASPECT WIDE	OFF
18	DOUBLE SCAN	OFF
19	INTERLACE	ON
20	H SHIFT	26
21	N/S CORRECTION	ADJ.

Typical On Screen Display based values when receiving PAL Phillips pattern.

TDA6612	ADJ
Stereo-Separation	(31)

Should be adjusted twice, once for 4 : 3 and once for 16 : 9 mode.

Y FILTER ADJUSTMENT

1. Input a PAL RED pattern.
2. Connect an oscilloscope to pin ① of CN0403 (R OUT) on C board.
3. Enter into service mode and press 3,8.
4. Adjust data by △ or ▽ to minimize the chroma element at CN0403 pin ①.

SUB BRIGHTNESS ADJUSTMENT

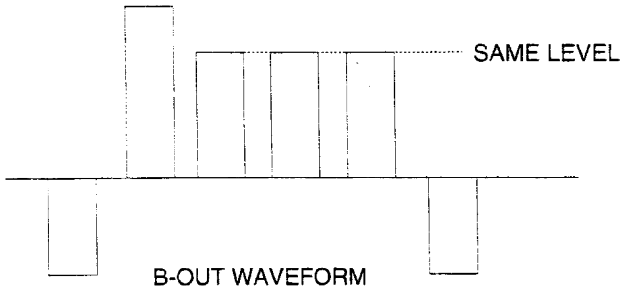
1. Input a Phillips pattern.
2. Enter into service mode and press 23.
3. Adjust data so that 0-IRE of grey scale and CUT-OFF 20-IRE are only slightly visible on screen.

SUB CONTRAST ADJUSTMENT

1. Input a video that contains a small 100% area on a Black Background.
2. Enter into service mode and press 01 to have PIC max followed by 21.
3. Connect oscilloscope to pin ① of CN0403 (R OUT) and adjust data to obtain 2.5Vp-p.

SUB COLOR ADJUSTMENT

1. Input a PAL color bar signal.
2. Connect an oscilloscope to pin ③ of CN0403 (B OUT) on the C board.
3. Enter into service mode and press 22 of CXA1587, 8 SUB COLOR.
4. Adjust data so that the right sides of the waveform are set to the same level.



B-OUT WAVEFORM

STEREO-SEPARATION ADJUSTMENT

1. Input a 1kHz stereo signal to the L-ch and a 400Hz stereo signal to the R-ch.
2. Enter into service mode and press 19.
3. Adjust data so that sound is not detected in the Right-ch and the Left-ch.

DRIVE AND CUT-OFF

See direct test mode list attached and refer to sub brightness or such for adjustment method.

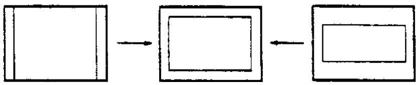
DEFLECTION SYSTEM ADJUSTMENT

1. Enter into service mode and select CXD2018.
2. Select and adjust each item in order to obtain the optimum image.

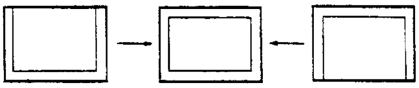
CXD2018

Item No	Adjustment item.	Data Amount
01	V SIZE	ADJ.
02	V SHIFT	ADJ.
03	S CORRECTION	ADJ.
04	V LINEARITY	ADJ.
05	H SIZE	ADJ.
06	PIN AMP	ADJ.
07	TILT	ADJ.
08	UPPER CORNER	ADJ.
09	LOWER CORNER	ADJ.
10	V BOW	ADJ.
11	ANGLE	ADJ.
12	HV COMP. V	12
13	HV COMP. H	8
14	FRAME SHIFT	OFF
15	FREE RUN 60 Hz	OFF
16	SYSTEM 60 Hz	OFF
17	ASPECT WIDE	OFF
18	DOUBLE SCAN	OFF
19	NON INTERLACE	ON
20	H SHIFT	26
21	N/S CORRECTION	ADJ.

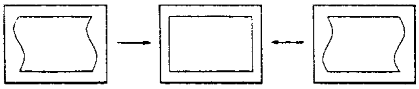
V SIZE



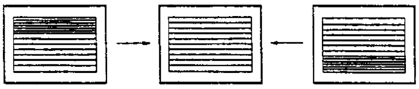
V SHIFT



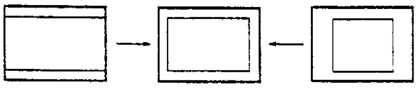
S CORRECTION



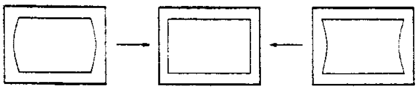
V LINEARITY



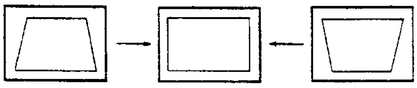
H SIZE



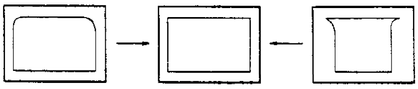
PIN AMP



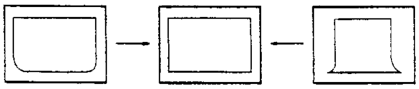
TILT



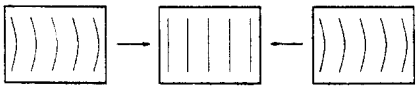
UPPER CORNER PIN



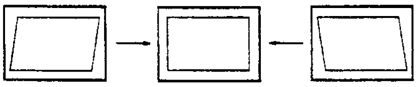
LOWER CORNER PIN



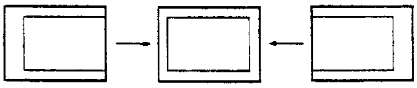
V BOW



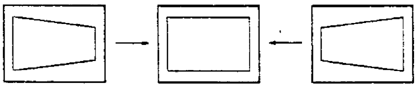
ANGLE



H SHIFT



N/S CORRECTION

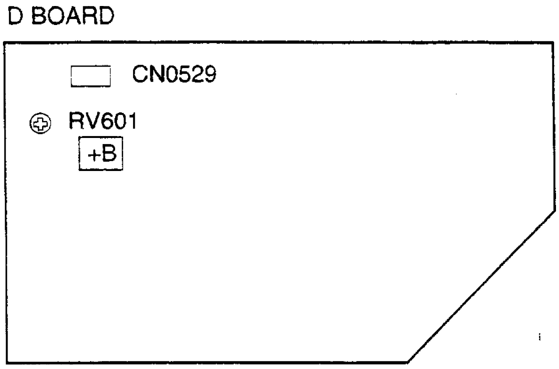


3. Press OK button to write data.

If the menu display prevents accurate adjustment, press 🔇 to clear, to resume, press 🔇 once again.

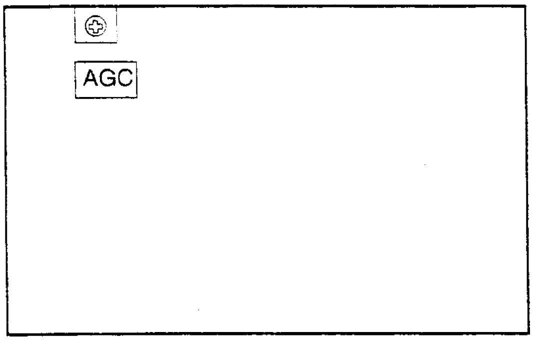
4-2. VOLUME ELECTRICAL ADJUSTMENTS

+B (+135V) ADJUSTMENT (RV601)



1. Switch on the power to the TV set.
2. Connect a digital multi-meter to pin ① of CN0529 on D board.
3. Adjust RV601 on D board to +135V ± 0.5V.

AGC ADJUSTMENT (IF BLOCK)



1. Receive an off-air signal.
2. Adjust the AGC VR so that there is no snow noise or cross-modulation visible on the screen.
3. Change the receiving channel and confirm status.

4-3. TEST MODE 2 :

Is available by pressing Test button twice, OSD 'TT' appears. The functions described below are available by pressing the two numbers. To release the Test Mode 2, press 0 twice, or switch the TV into Stand-by Mode.

00	switch Test Mode 2 off
01	picture maximum
02	picture minimum
03	Volume 35%
04	Volume 50%
05	Volume 65%
06	Volume 80%
07	Ageing Condition (Volume min., Picture max., Brightness max., Ageing 2 Mode of CXA1587, TDA2595 is locked to CXA1587 via PIN 34 of µ-Con.)
08	Shipping Condition (Analog Values are RESET due to factory setting, Prog 1 is selected, TT Mode is switched off)
09	dummy
10	Tenth entry is deleted
11	Balance
12	Hue
13	Display of Software Version and TV set configeration
14	Adjustment of N/S Correction
15	Read factory setting from NVM Reads Volume, Balance, Treble, Bass, Brightness, Contrast, Hue, Sharpness, Colour values from ROM to the actual used values (Last Power Memory)
16	Save actual used values as RESET values Memorize actual used values Balance, Treble, Bass, Hue, Sharpness at RESET position in NVM.
17	Preset Level for AV Sources
18	dummy
19	Stereo Seperation
20	Tenth entry is deleted
21	Sub Contrast
22	Sub Colour
23	Sub Brightness
24-29	dummy

30	Tenth entry is deleted
31	Green Drive
32	Blue Drive
33	Green Cut Off (Auto Cut Off)
34	Blue Cut Off (Auto Cut Off)
35	Red Cut Off (Manual Cut Off) (Auto Cut Off is switched off)
36	Green Cut Off (Manual Cut Off) (Auto Cut Off is switched off)
37	Blue Cut Off (Manual Cut Off) (Auto Cut Off is switched off)
38	Y-Filter adjustment (Trap is switched off and TDA9145 is switched in forced NTSC Mode)
39	dummy
40	Tenth entry is deleted
41	Default setting of CXA1587 (Only available in Prog 99)
42	Default setting of CXA2018 (Only available in Prog 99)
43	Default setting of CXA1526 (Only available in Prog 99)
44	(all Port High) Not yet
45	(all Port High) Not yet
46	IR Channel Pressetting Mode The channel pressetting can be done by a Special IR Transmitter
47-48	dummy
49	Erase the NVM Testbyte (this byte detects already stored NVM's) After selecting this function, switch TV Off and On -> the NVM will be preset by µ-Controller. (Not the channel data)

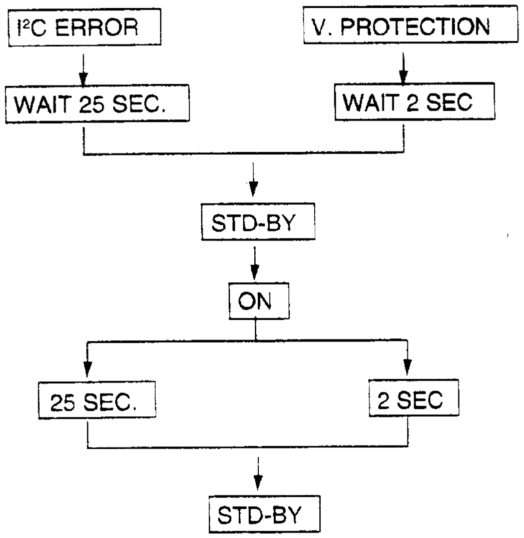
Note: For No 35, 36, 37 and 38 special pressing (AKB, forced Color Mode, Trap) is selected. After selecting a new Test Mode Number, the AKB is switched ON, the Trap is switched ON and TDA9145 is switched to Auto Search Mode.

In Test Mode 2 the Menu display is switchable by the Speaker-Off button.

4-4. ERROR MESSAGE

Self diagnostic system operates as follows.

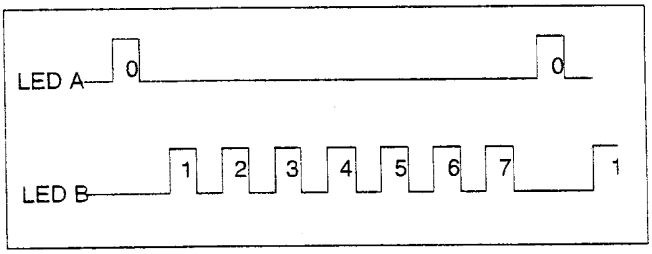
- When the microprocessor is unable to receive an acknowledgement back from the device, the LED starts flashing according to the table below.



4-5. ERROR I²C BUS DIAGNOSTIC SYSTEM FOR AE2-B CHASSIS.

For all IC's used in the AE 2-B chassis which are necessary to obtain picture and sound there is an inbuilt I²C Bus diagnostic system.

In the case of no acknowledge bit, LED A and LED B start blinking as shown.



In the case of more than one error in parallel, the blinking error shows max priority according to the error number (e.g. error 2 and error 5 appear together, then LED,s show error 2).

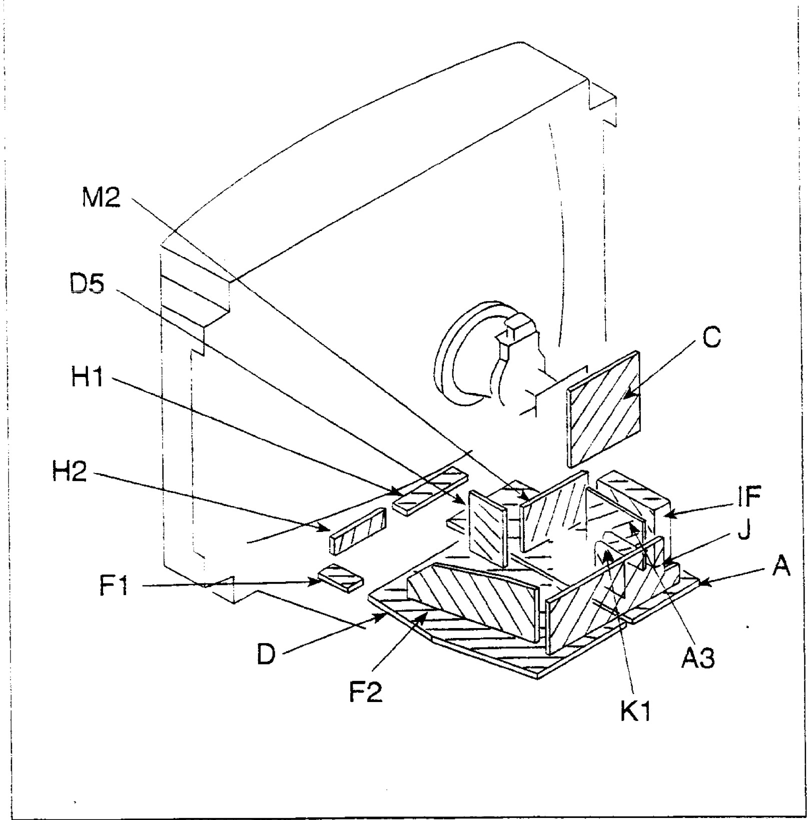
ERROR TABLE

ERROR COUNT	IC TYPE	FUNCTION
1	II C BUS	SDA low
2	X24C16	EPROM
4	TDA9145	Colour decoder
5	CXA1587	RGB/Jungle
6	TDA6612	Sound processor
7	CXD2018	V deflection
8	CXA1545	AV switch
11	SDA5248	Text
13		V protection

Stand By LED blinking

No 1K return

5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note :

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytic.
- indication of resistance, which dose not have one for rating electrical power, is as follows.

Pitch : 5mm
Rating electrical power : ¼W

- Chip resistor is in 1/10W.
- All resistors are in ohms. kΩ = 1000Ω, MΩ = 1000KΩ
- ▭ : nonflammable resistor.
- ▭ : fusible resistor.
- △ : internal component.
- ▭ : panel designation or adjustment for repair.
- All variable and adjustable resistors have charactristic curve B, unless otherwise noted.
- All voltages are in V.
- Readings are taken with a 10MΩ digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- ━━ : B + bus.
- ▬ ▬ : B − bus.
- ░░ : signal path.(RF)
- ⊥ : earth - ground
- ⏚ : earth - chassis

Reference information

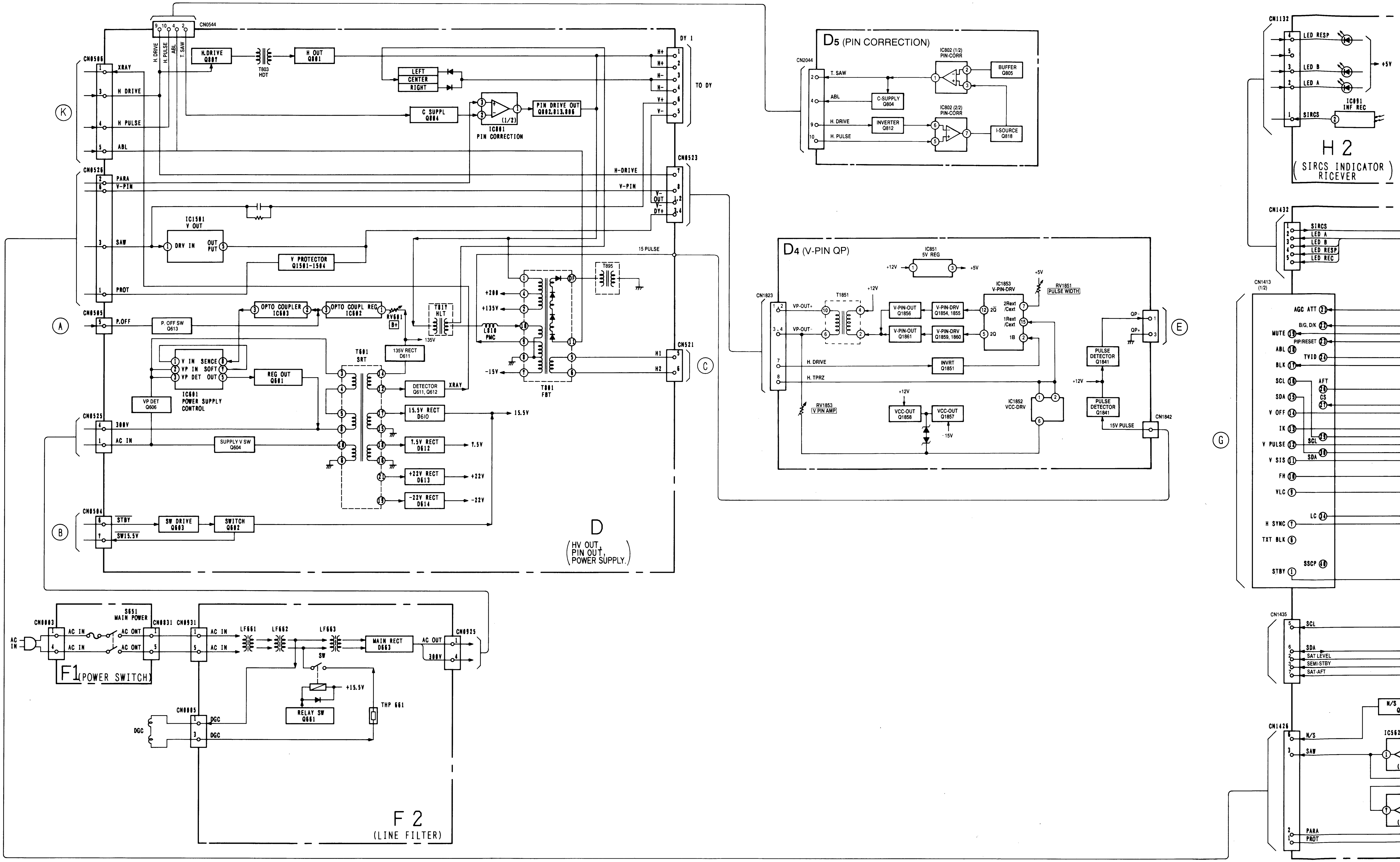
RESISTOR	RN	: METAL FILM
	RC	: SOLID
	FPRD	: NONFLAMMABLE CARBON
	FUSE	: NONFLAMMABLE FUSIBLE
	RS	: NONFLAMMABLE METAL OX
	RB	: NONFLAMMABLE CEMENT
	RW	: NONFLAMMABLE WIREWOUN
	※	: ADJUSTMENT RESISTOR
COIL	LF-8L	: MICRO INDUCTOR
CAPACITOR	TA	: TANTALUM
	PS	: STYROL
	PP	: POLYPROPYLENE
	PT	: MYLAR
	MPS	: METALIZED POLYESTER
	MPP	: METALIZED POLYPROPYLENE
	ALB	: BIPOLAR
	ALT	: HIGH TEMPERATURE
	ALR	: HIGH RIPPLE

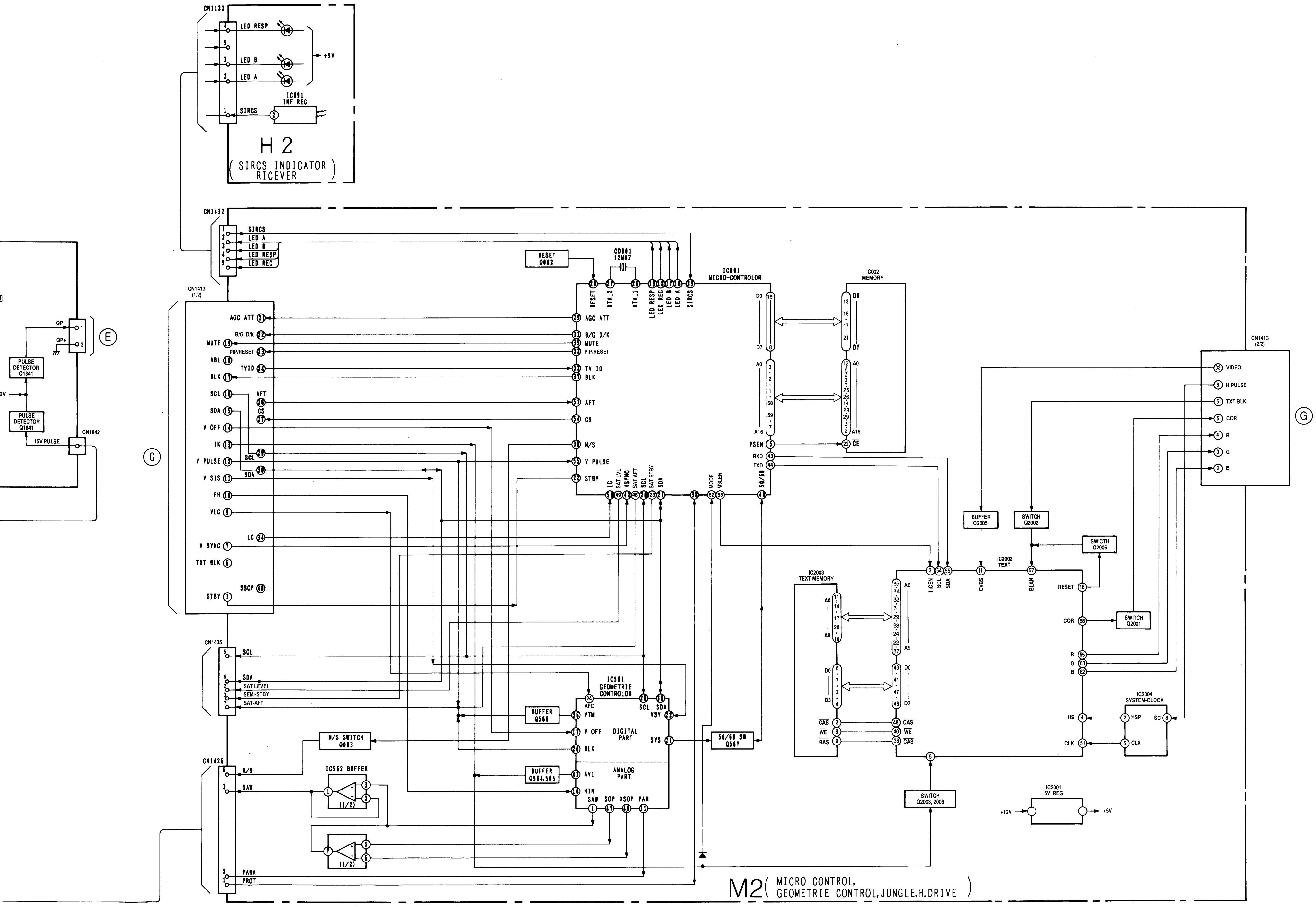
Note: The components identified by shading ⚠ are critical for safety. Replace c part number specified.

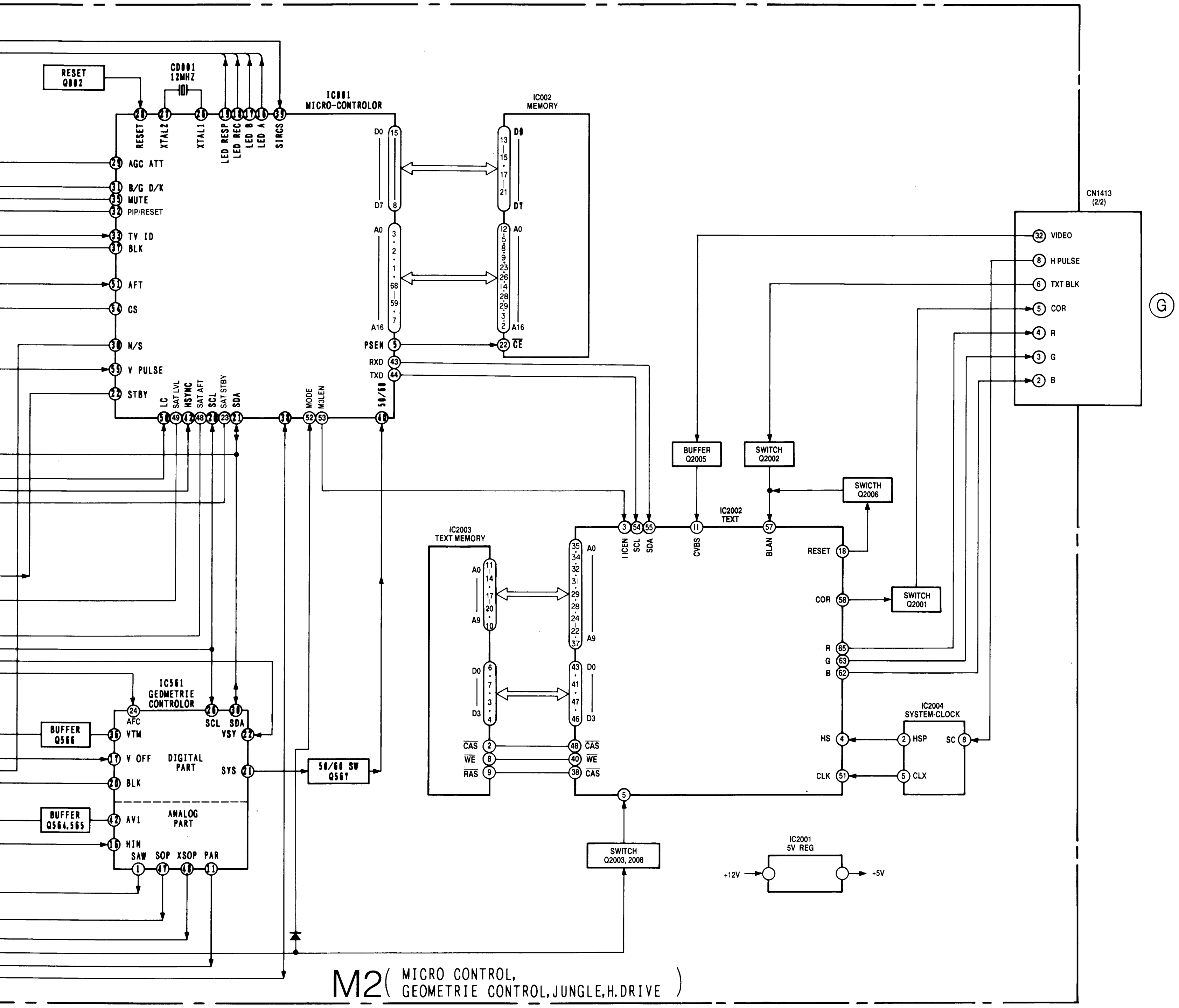
Note: Les composants identifiés par une par une marque ⚠ sont d'une im critique pour la sécurité. Ne les r que par des pièces de numéro

SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAM (1)

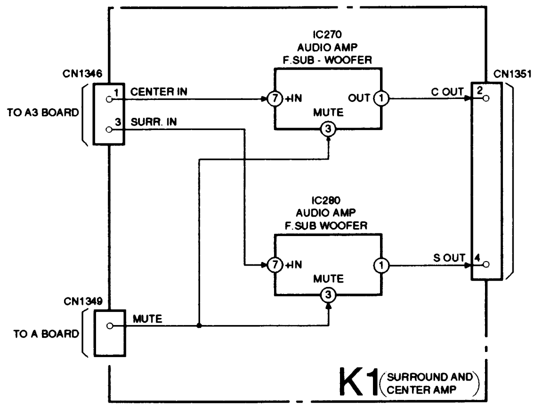

CN0544
H. DRIVE
H. PULSE
ABL
T. SAW
CN0506
XRAY
H DRIVE
H PULSE
ABL
K
H.DRIVE Q807
T803 HDT
H OUT Q801
LEFT
CENTER
RIGHT
C SUPPL Q804
IC801 PIN CORRECTION
(1/2)
PIN DRIVE OUT Q802,813,806
DY 1
H+
H-
V+
V-
TO DY
CN0526
PARA
V-PIN
SAW
PROT
CN0523
H-DRIVE
V-PIN
V-OUT
V-DY+
IC1501 V OUT
DRV IN
OUT PUT
V PROTECTOR Q1501-1504
15 PULSE
CN0505
A
P.OFF
P. OFF SW Q613
OPTO COUPLER IC603
OPTO COUPL REG IC602
RV601
B+
T617 HLT
135V
T895
+200
+135V
L610 PMC
-15V
T801 FBT
CN521
H1
H2
C
IC601 POWER SUPPLY CONTROL
V IN
VP IN
VP DET
SENCE
SOFT
OUT
REG OUT Q601
T601 SRT
135V RECT D611
DETECTOR Q611, Q612
XRAY
15.5V RECT D610
15.5V
7.5V RECT D612
7.5V
+22V RECT D613
+22V
-22V RECT D614
-22V
VP DET Q606
CN0525
300V
AC IN
SUPPLY V SW Q604
CN0504
B
STBY
SW15.5V
SW DRIVE Q603
SWITCH Q602
D
(HV OUT, PIN OUT, POWER SUPPLY.)
CN0003
AC IN
S651 MAIN POWER
AC ONT
CN0031
CN0931
LF661
LF662
LF663
MAIN RECT D663
AC OUT
CN0925
300V
SW
+15.5V
RELAY SW Q661
THP 661
CN0005
DGC
F1 (POWER SWITCH)
F 2 (LINE FILTER)
D5 (PIN CORRECTION)
CN2044
T. SAW
ABL
H. DRIVE
H. PULSE
IC802 (1/2) PIN-CORR
IC802 (2/2) PIN-CORR
C-SUPPLY Q804
INVERTER Q812
BUFFER Q805
I-SOURCE Q818
D4 (V-PIN QP)
IC851 5V REG
+12V
+5V
CN1823
VP-OUT+
VP-OUT-
T1851
V-PIN-OUT Q1856
V-PIN-OUT Q1861
V-PIN-DRV Q1854, 1855
V-PIN-DRV Q1859, 1860
IC1853 V-PIN-DRV
2Rext /Cext
1Rext /Cext
RV1851 PULSE WIDTH
H. DRIVE
H. TPRZ
INVRT Q1851
RV1853 V PIN AMP
VCC-OUT Q1858
VCC-OUT Q1857
-15V
IC1852 VCC-DRV
PULSE DETECTOR Q1841
QP-
QP+
E
CN1842
15V PULSE
CN1132
LED RESP
LED B
LED A
SIRCS
IC001 INF REC
+5V
H 2 (SIRCS INDICATOR RICEVER)
CN1432
SIRCS
LED A
LED B
LED RESP
LED REC
CN1413 (1/2)
G
AGC ATT
B/G, D/K
MUTE
PIP/RESET
ABL
TVID
BLK
SCL
AFT
SDA
CS
V OFF
IK
V PULSE
V SIS
FH
VLC
LC
H SYNC
TXT BLK
SSCP
STBY
CN1435
SCL
SDA
SAT LEVEL
SEMI-STBY
SAT-AFT
CN1426
N/S
SAW
IC562
PARA
PROT

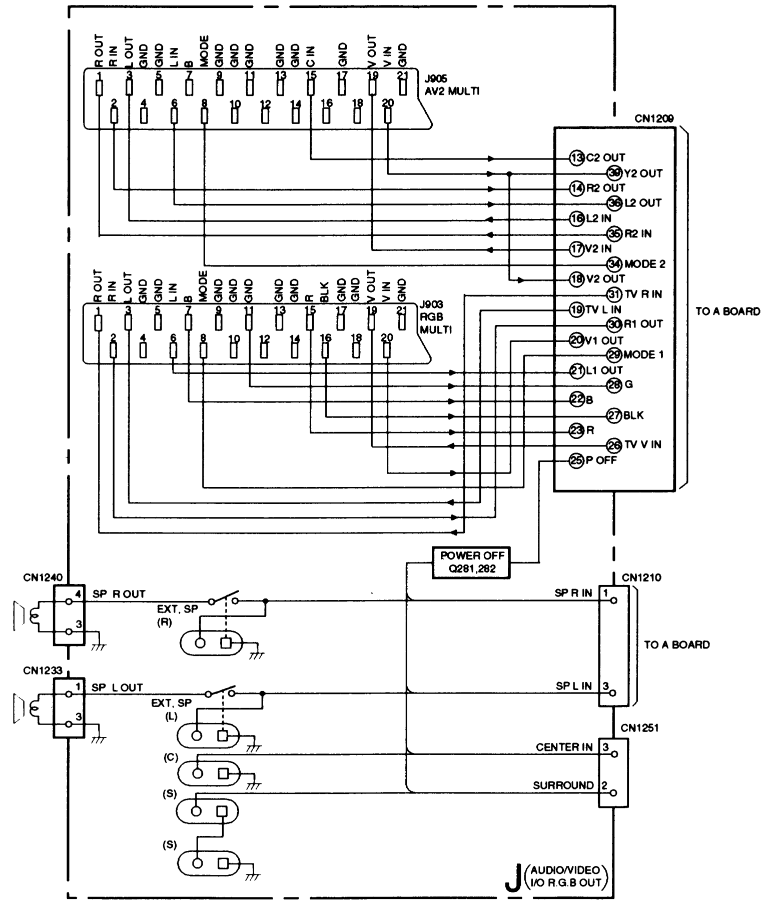

CN1132
LED RESP
LED B
LED A
SIRCS
+5V
IC091
INF REC
H 2
(SIRCS INDICATOR RICEVER)
CN1432
SIRCS
LED A
LED B
LED RESP
LED REC
RESET
Q002
CD001
12MHZ
IC001
MICRO-CONTROLOR
RESET
XTAL2
XTAL1
LED RESP
LED REC
LED B
LED A
SIRCS
IC002
MEMORY
D0
D7
A0
A16
PSEN
CE
RXD
TXD
CN1413 (1/2)
AGC ATT
B/G, D/K
MUTE
PIP/RESET
ABL
TVID
BLK
SCL
AFT
SDA
CS
V OFF
IK
V PULSE
V SIS
FH
VLC
LC
H SYNC
TXT BLK
SSCP
STBY
AGC ATT
B/G D/K
MUTE
PIP/RESET
TV ID
BLK
AFT
CS
N/S
V PULSE
STBY
LC
SAT LVL
HSYNC
SAT AFT
SCL
SAT STBY
SDA
MODE
M3LEN
50/60
G
E
QP-
QP+
PULSE DETECTOR Q1841
15V PULSE
CN1842
CN1435
SCL
SDA
SAT LEVEL
SEMI-STBY
SAT-AFT
IC561
GEOMETRIE CONTROLOR
AFC
YTM
V OFF
BLK
SCL
SDA
VSY
DIGITAL PART
SYS
ANALOG PART
AV1
HIN
SAW
SOP
XSOP
PAR
BUFFER Q566
BUFFER Q564,565
N/S SWITCH Q003
IC562 BUFFER
(1/2)
50/60 SW Q567
CN1426
N/S
SAW
PARA
PROT
IC2003
TEXT MEMORY
A0
A9
D0
D3
CAS
WE
RAS
IC2002
TEXT
ICEN
SCL
SDA
CVBS
BLAN
RESET
COR
R
G
B
HS
CLK
BUFFER Q2005
SWITCH Q2002
SWICTH Q2006
SWITCH Q2001
IC2004
SYSTEM-CLOCK
HSP
SC
CLX
SWITCH Q2003, 2008
IC2001
5V REG
+12V
+5V
CN1413 (2/2)
VIDEO
H PULSE
TXT BLK
COR
R
G
B
M2(MICRO CONTROL, GEOMETRIE CONTROL, JUNGLE, H.DRIVE)

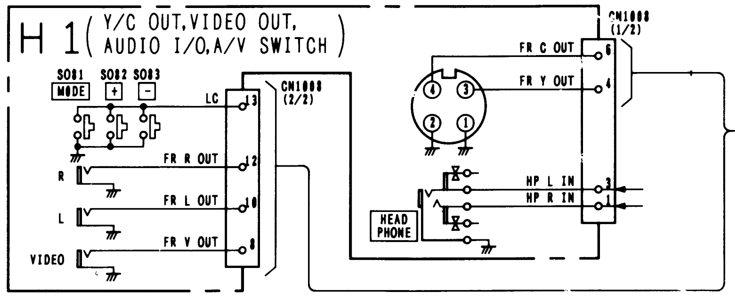

RESET
Q002
CD001
12MHZ
IC001
MICRO-CONTROLOR
RESET
XTAL2
XTAL1
LED RESP
LED REC
LED B
LED A
SIRCS
AGC ATT
B/G D/K
MUTE
PIP/RESET
TV ID
BLK
AFT
CS
N/S
V PULSE
STBY
LC
SAT LVL
HSYNC
SAT AFT
SCL
SAT STBY
SDA
MODE
M3LEN
50/60
D0
D7
A0
A16
PSEN
RXD
TXD
IC002
MEMORY
D0
D7
A0
A16
CE
CN1413
(2/2)
VIDEO
H PULSE
TXT BLK
COR
R
G
B
G
BUFFER
Q2005
SWITCH
Q2002
SWICTH
Q2006
IC2002
TEXT
ICEN
SCL
SDA
CVBS
BLAN
RESET
COR
SWITCH
Q2001
R
G
B
HS
CLK
IC2003
TEXT MEMORY
A0
A9
D0
D3
CAS
WE
RAS
A0
A9
D0
D3
CAS
WE
CAS
IC2004
SYSTEM-CLOCK
HSP
SC
CLX
SWITCH
Q2003, 2008
IC2001
5V REG
+12V
+5V
IC561
GEOMETRIE
CONTROLOR
AFC
SCL
SDA
VSY
BUFFER
Q566
VTM
V OFF
DIGITAL
PART
SYS
BLK
50/60 SW
Q567
BUFFER
Q564,565
AVI
ANALOG
PART
HIN
SAW
SOP
XSOP
PAR

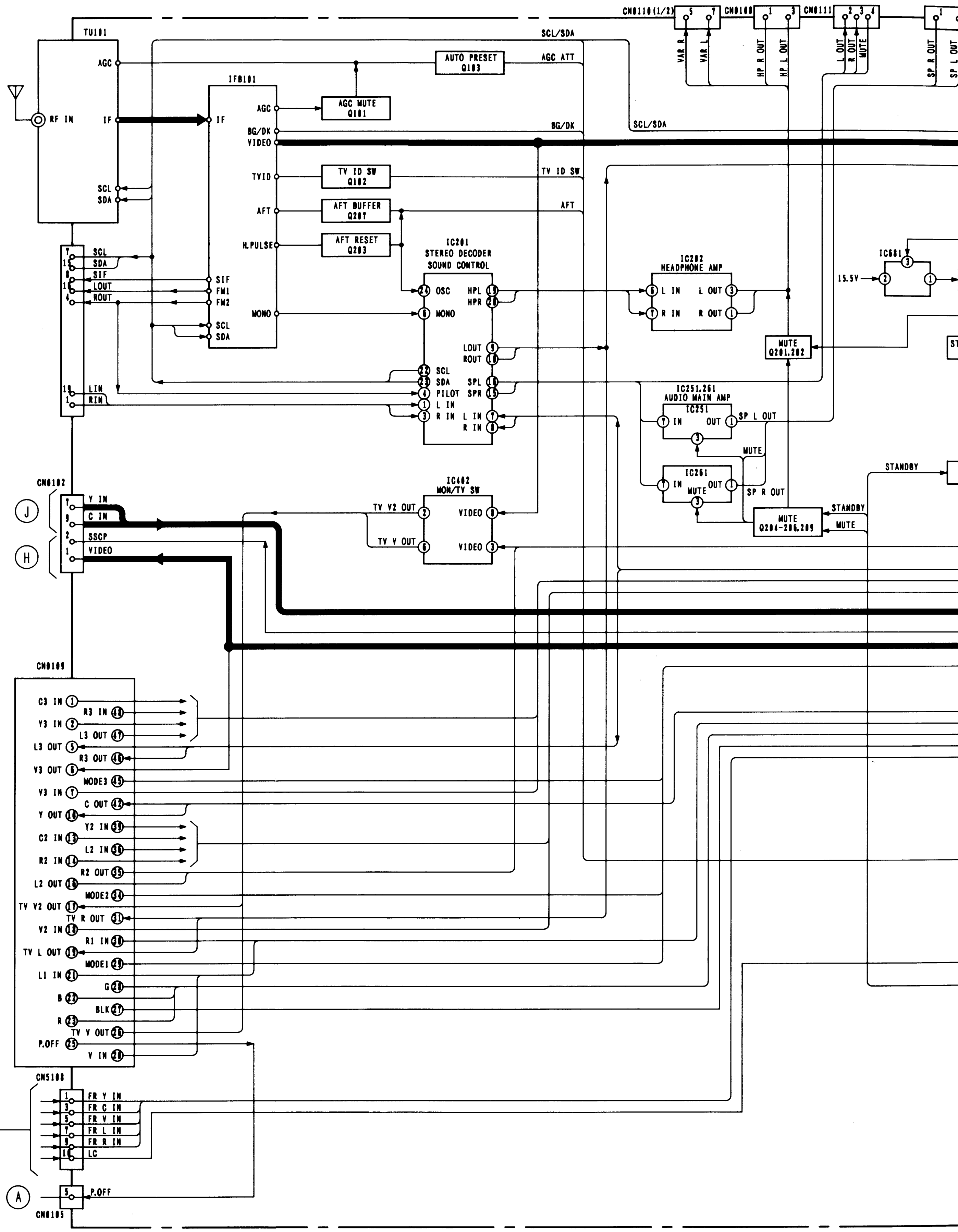
M2(MICRO CONTROL, GEOMETRIE CONTROL,JUNGLE,H.DRIVE)

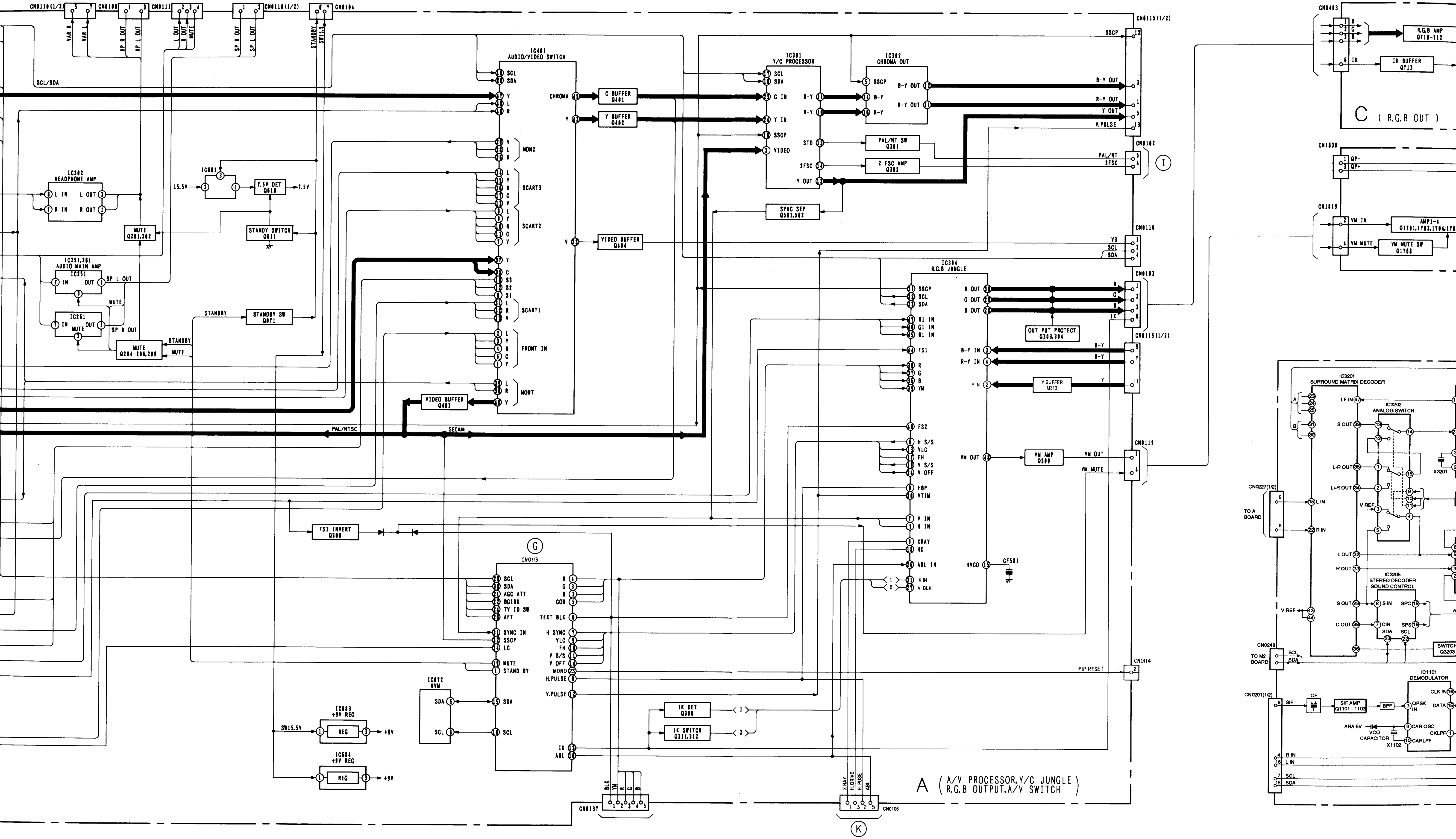
BLOCK DIAGRAM (2)

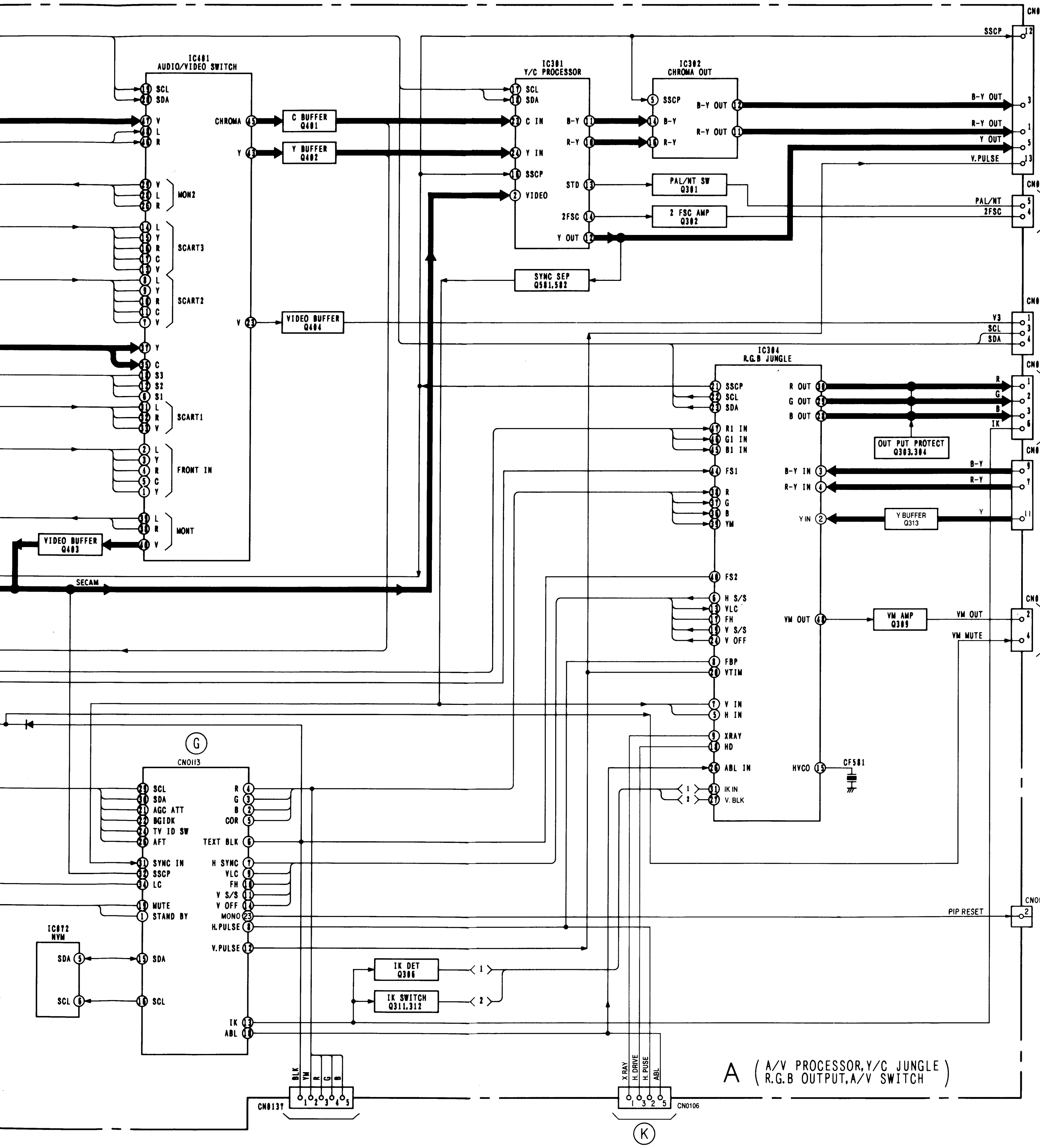

IC270
AUDIO AMP
F.SUB - WOOFER
CN1346
TO A3 BOARD
1 CENTER IN
3 SURR. IN
+IN
OUT
MUTE
C OUT
CN1351
IC280
AUDIO AMP
F.SUB WOOFER
S OUT
CN1349
TO A BOARD
MUTE
K1 (SURROUND AND CENTER AMP)

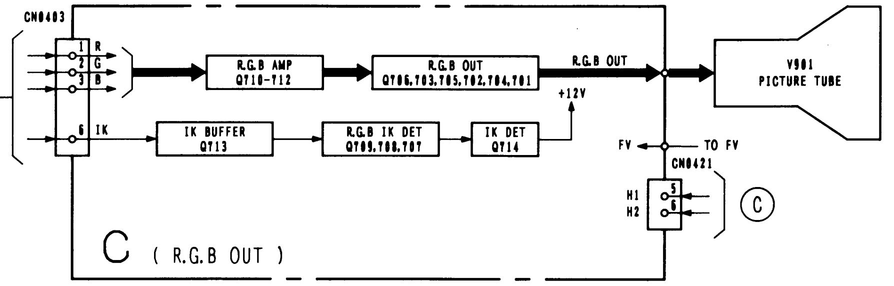

R OUT
R IN
L OUT
GND
L IN
B
MODE
C IN
V OUT
V IN
J905
AV2 MULTI
CN1209
13 C2 OUT
38 Y2 OUT
14 R2 OUT
36 L2 OUT
16 L2 IN
35 R2 IN
17 V2 IN
34 MODE 2
18 V2 OUT
31 TV R IN
19 TV L IN
30 R1 OUT
20 V1 OUT
29 MODE 1
21 L1 OUT
28 G
22 B
27 BLK
23 R
26 TV V IN
25 P OFF
TO A BOARD
R
BLK
J903
RGB
MULTI
POWER OFF
Q281,282
CN1240
SP R OUT
EXT. SP
(R)
CN1210
SP R IN
TO A BOARD
CN1233
SP L OUT
EXT. SP
(L)
SP L IN
CN1251
(C)
CENTER IN
(S)
SURROUND
(S)
J (AUDIO/VIDEO I/O R.G.B OUT)

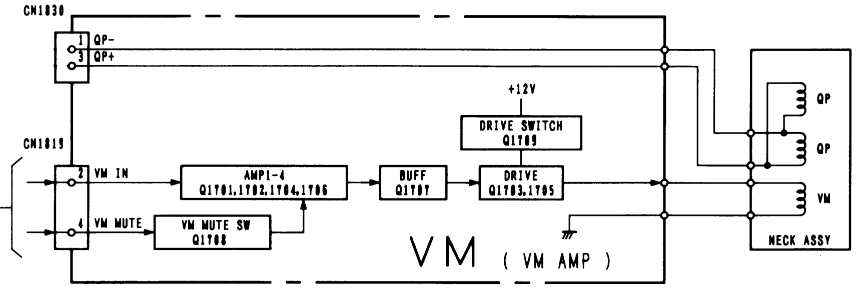

H1 (Y/C OUT, VIDEO OUT, AUDIO I/O, A/V SWITCH)
S001
MODE
S002
+
S003
-
LC
CN1000
(2/2)
R
FR R OUT
L
FR L OUT
VIDEO
FR V OUT
CN1000
(1/2)
FR C OUT
FR Y OUT
HEAD PHONE
HP L IN
HP R IN

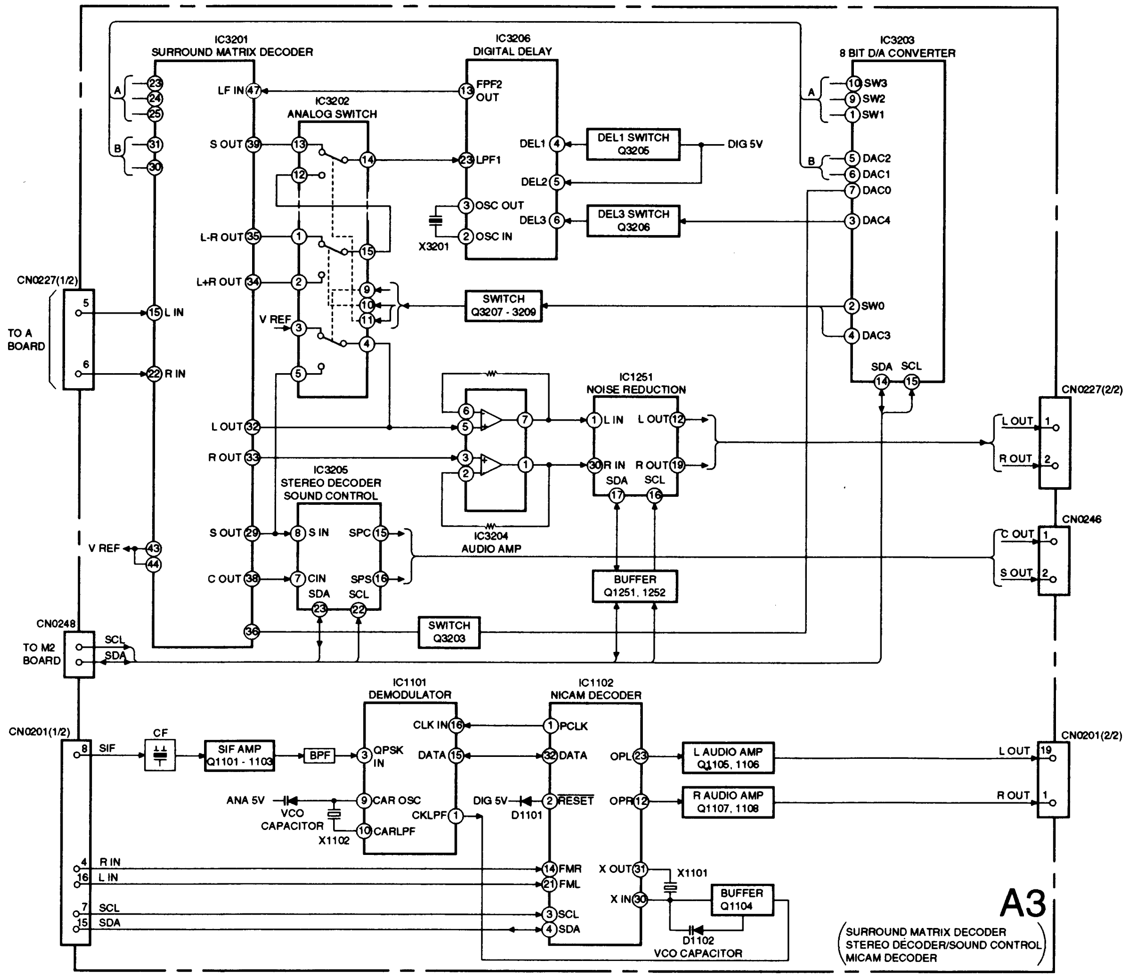

TU101
RF IN
AGC
IF
SCL
SDA
IFB101
AGC
IF
BG/DK
VIDEO
TVID
AFT
H.PULSE
SIF
FM1
FM2
MONO
SCL
SDA
AUTO PRESET
Q103
AGC ATT
AGC MUTE
Q101
TV ID SW
Q102
AFT BUFFER
Q207
AFT RESET
Q203
SCL/SDA
BG/DK
TV ID SW
AFT
SCL
SDA
SIF
LOUT
ROUT
LIN
RIN
IC201
STEREO DECODER
SOUND CONTROL
OSC
MONO
HPL
HPR
LOUT
ROUT
SCL
SDA
PILOT
L IN
R IN
SPL
SPR
L IN
R IN
IC402
MON/TV SW
TV V2 OUT
TV V OUT
VIDEO
CN0102
J
H
Y IN
C IN
SSCP
VIDEO
CN0110 (1/2)
CN0108
CN0111
VAR R
VAR L
HP R OUT
HP L OUT
L OUT
R OUT
MUTE
SP R OUT
SP L OUT
IC202
HEADPHONE AMP
L IN
R IN
L OUT
R OUT
IC601
15.5V
MUTE
Q201,202
IC251,261
AUDIO MAIN AMP
IC251
IN
OUT
SP L OUT
MUTE
IC261
IN
OUT
MUTE
SP R OUT
MUTE
Q204-206,209
STANDBY
MUTE
STANDBY
CN0109
C3 IN 1
R3 IN 48
Y3 IN 2
L3 OUT 47
L3 OUT 5
R3 OUT 46
V3 OUT 6
MODE3 45
V3 IN 7
C OUT 42
Y OUT 10
Y2 IN 39
C2 IN 13
L2 IN 36
R2 IN 14
R2 OUT 35
L2 OUT 16
MODE2 34
TV V2 OUT 17
TV R OUT 31
V2 IN 18
R1 IN 30
TV L OUT 19
MODE1 29
L1 IN 21
G 28
B 22
BLK 27
R 23
TV V OUT 26
P.OFF 25
V IN 20
CN5100
FR Y IN
FR C IN
FR V IN
FR L IN
FR R IN
LC
A
P.OFF
CN0105


CN0110 (1/2)
CN0108
CN0111
CN0110 (1/2)
CN0104
VAR R
VAR L
HP R OUT
HP L OUT
L OUT
R OUT
MUTE
SP R OUT
SP L OUT
STANDBY
SW15.5V
SCL/SDA
IC202
HEADPHONE AMP
MUTE
Q201,202
IC251,261
AUDIO MAIN AMP
IC251
SP L OUT
IC261
SP R OUT
MUTE
Q204-206,209
STANDBY
IC601
15.5V
7.5V DET
Q610
7.5V
STANDY SWITCH
Q611
STANDBY SW
Q071
IC401
AUDIO/VIDEO SWITCH
SCL
SDA
CHROMA
C BUFFER
Q401
Y BUFFER
Q402
MON2
SCART3
SCART2
VIDEO BUFFER
Q404
SCART1
FRONT IN
MONT
VIDEO BUFFER
Q403
PAL/NTSC
SECAM
IC301
Y/C PROCESSOR
C IN
Y IN
SSCP
VIDEO
B-Y
R-Y
STD
2FSC
Y OUT
IC302
CHROMA OUT
B-Y OUT
R-Y OUT
PAL/NT SW
Q301
2 FSC AMP
Q302
SYNC SEP
Q501,502
CN0115 (1/2)
CN0102
PAL/NT
2FSC
Y OUT
V.PULSE
I
CN0116
V3
CN0103
IC304
R.G.B JUNGLE
R OUT
G OUT
B OUT
R1 IN
G1 IN
B1 IN
FS1
OUT PUT PROTECT
Q303,304
B-Y IN
R-Y IN
Y IN
Y BUFFER
Q313
YM
FS2
H S/S
VLC
FH
V S/S
V OFF
VM OUT
VM AMP
Q309
CN0119
VM MUTE
FBP
VTIM
V IN
H IN
XRAY
HD
ABL IN
IK IN
V. BLK
HVCO
CF501
FS1 INVERT
Q308
G
CN0113
AGC ATT
BGIDK
TV ID SW
AFT
SYNC IN
LC
STAND BY
TEXT BLK
H SYNC
MONO
H.PULSE
IK
ABL
IC072
NVM
IC603
+9V REG
REG
+9V
SW15.5V
IC604
+9V REG
IK DET
Q306
IK SWITCH
Q311,312
CN0114
PIP RESET
CN0137
BLK
YM
CN0106
X RAY
H. DRIVE
H. PUSE
K
A (A/V PROCESSOR,Y/C JUNGLE R.G.B OUTPUT,A/V SWITCH)
CN0403
R.G.B AMP
Q710-712
IK BUFFER
Q713
C (R.G.B OUT)
CN1030
QP-
QP+
CN1019
VM IN
AMP1-4
Q1701,1702,1704,1706
VM MUTE SW
Q1708
IC3201
SURROUND MATRIX DECODER
LF IN
IC3202
ANALOG SWITCH
S OUT
L-R OUT
L+R OUT
V REF
X3201
CN0227(1/2)
TO A BOARD
L IN
R IN
L OUT
R OUT
IC3205
STEREO DECODER
SOUND CONTROL
S IN
SPC
C IN
SPS
CN0248
TO M2 BOARD
SWITCH
Q3203
CN0201(1/2)
SIF
CF
SIF AMP
Q1101-1103
BPF
QPSK IN
IC1101
DEMODULATOR
CLK IN
DATA
ANA 5V
VCO CAPACITOR
X1102
CAR OSC
CARLPF
CKLPF

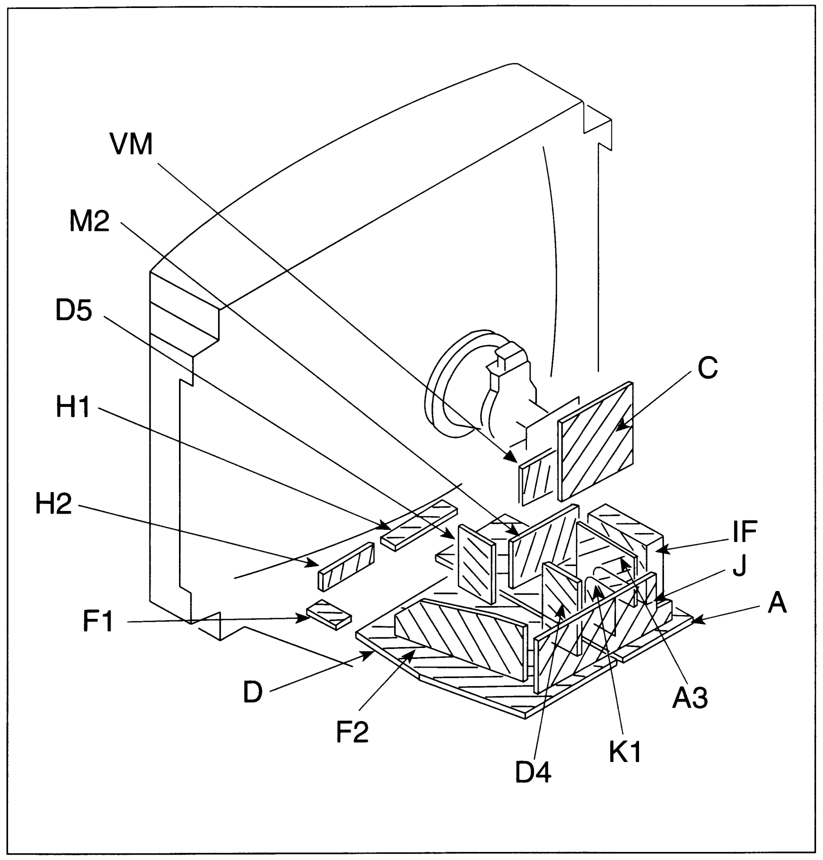

IC401 AUDIO/VIDEO SWITCH
C BUFFER Q401
Y BUFFER Q402
VIDEO BUFFER Q404
VIDEO BUFFER Q403
MON2
SCART3
SCART2
SCART1
FRONT IN
MONT
SECAM
IC301 Y/C PROCESSOR
IC302 CHROMA OUT
PAL/NT SW Q301
2 FSC AMP Q302
SYNC SEP Q501,502
IC304 R.G.B JUNGLE
OUT PUT PROTECT Q303,304
Y BUFFER Q313
VM AMP Q309
CF501
CN0113
IC072 NVM
IK DET Q306
IK SWITCH Q311,312
CN0115(1/2)
CN0102
CN0116
CN0103
CN0119
CN0114
PIP RESET
CN0137
CN0106
A (A/V PROCESSOR,Y/C JUNGLE R.G.B OUTPUT,A/V SWITCH)


CN0403
R.G.B AMP Q710-712
R.G.B OUT Q700,703,705,702,704,701
R.G.B OUT
V901 PICTURE TUBE
IK BUFFER Q713
R.G.B IK DET Q709,708,707
IK DET Q714
+12V
FV
TO FV
CN0421
H1
H2
C (R.G.B OUT)


CN1030
QP-
QP+
CN1019
VM IN
VM MUTE
AMP1-4 Q1701,1702,1704,1706
BUFF Q1707
+12V
DRIVE SWITCH Q1709
DRIVE Q1703,1705
VM MUTE SW Q1708
QP
VM
NECK ASSY
VM (VM AMP)


IC3201 SURROUND MATRIX DECODER
IC3202 ANALOG SWITCH
IC3206 DIGITAL DELAY
DEL1 SWITCH Q3205
DEL3 SWITCH Q3206
DIG 5V
X3201
IC3203 8 BIT D/A CONVERTER
CN0227(1/2)
TO A BOARD
SWITCH Q3207 - 3208
IC1251 NOISE REDUCTION
IC3205 STEREO DECODER SOUND CONTROL
IC3204 AUDIO AMP
BUFFER Q1251, 1252
SWITCH Q3203
CN0227(2/2)
CN0246
CN0248
TO M2 BOARD
CN0201(1/2)
SIF AMP Q1101 - 1103
BPF
IC1101 DEMODULATOR
IC1102 NICAM DECODER
ANA 5V
VCO CAPACITOR
X1102
D1101
X1101
BUFFER Q1104
D1102 VCO CAPACITOR
L AUDIO AMP Q1105, 1106
R AUDIO AMP Q1107, 1108
CN0201(2/2)
A3
(SURROUND MATRIX DECODER STEREO DECODER/SOUND CONTROL NICAM DECODER)

5-2. CIRCUIT BOARDS LOCATION


VM
M2
D5
H1
H2
F1
D
F2
D4
K1
A3
A
J
IF
C

Reference information

RESISTOR	RN	: METAL FILM
	RC	: SOLID
	FPRD	: NONFLAMMABLE CARBON
	FUSE	: NONFLAMMABLE FUSIBLE
	RS	: NONFLAMMABLE METAL OXIDE
	RB	: NONFLAMMABLE CEMENT
	RW	: NONFLAMMABLE WIREWOUND
	※	: ADJUSTMENT RESISTOR
COIL	LF-8L	: MICRO INDUCTOR
CAPACITOR	TA	: TANTALUM
	PS	: STYROL
	PP	: POLYPROPYLENE
	PT	: MYLAR
	MPS	: METALIZED POLYESTER
	MPP	: METALIZED POLYPROPYLENE
	ALB	: BIPOLAR
	ALT	: HIGH TEMPERATURE
	ALR	: HIGH RIPPLE

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et par une marque ⚠ sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces de numéro spécifié.

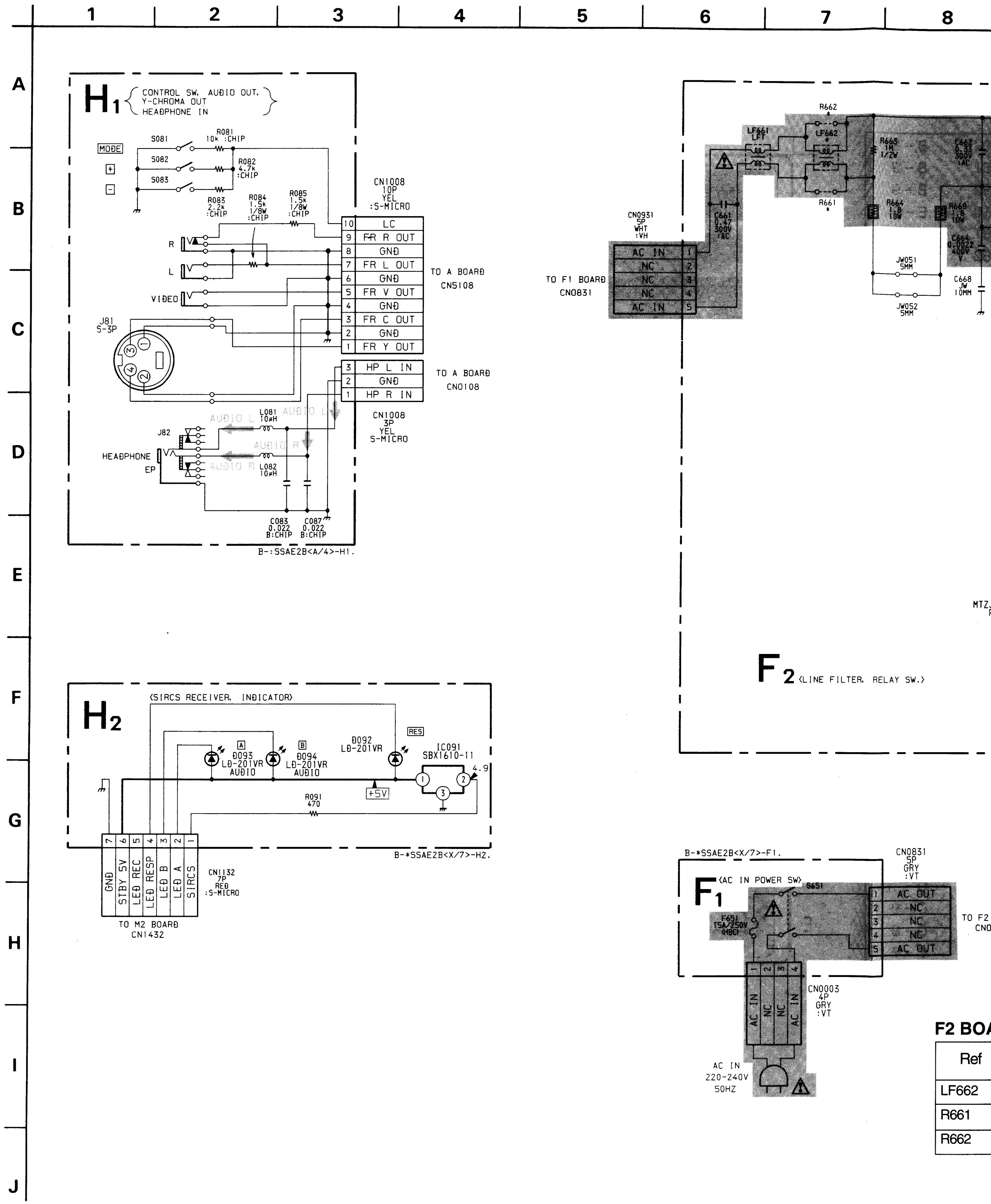
5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note :

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytic.
- Indication of resistance, which dose not have one for rating electrical power, is as follows.

  Pitch : 5mm
  Rating electrical power : ¼W

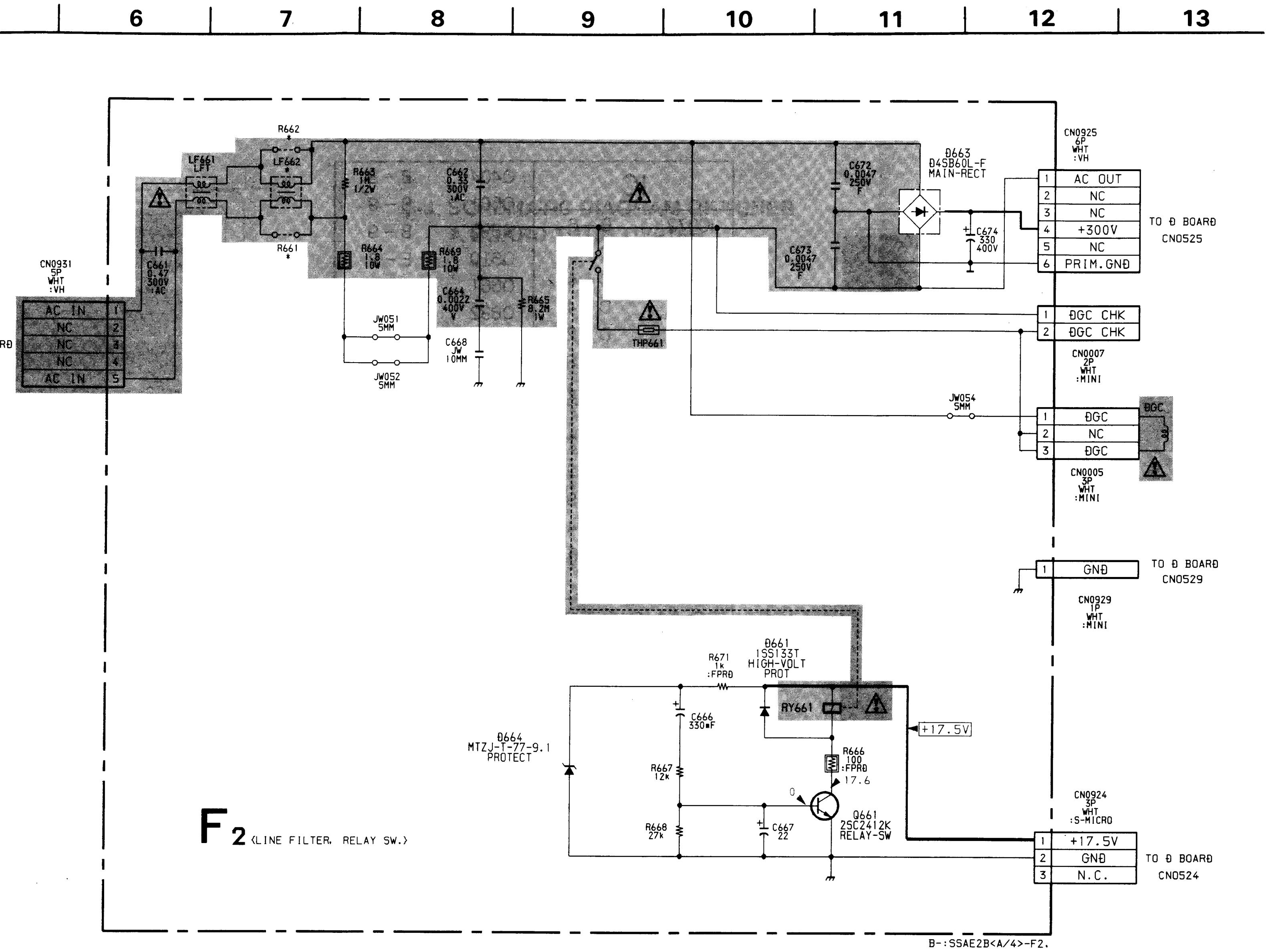
- Chip resistor is in 1/10W.
- All resistors are in ohms. kΩ = 1000 Ω, MΩ = 1000K Ω
- : nonflammable resistor.
- : fusible resistor.
- △ : internal component.
- ☐ : panel designation or adjustment for repair.
- All variable and adjustable resistors have charactristic curve B, unless otherwise noted.
- All voltages are in V.
- Readings are taken with a 10MΩ digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- ━━ : B+ bus.
- ▬ ▬ : B– bus.
- ➡ : signal path.(RF)
- ⊥ : earth - ground
- ⏚ : earth - chassis

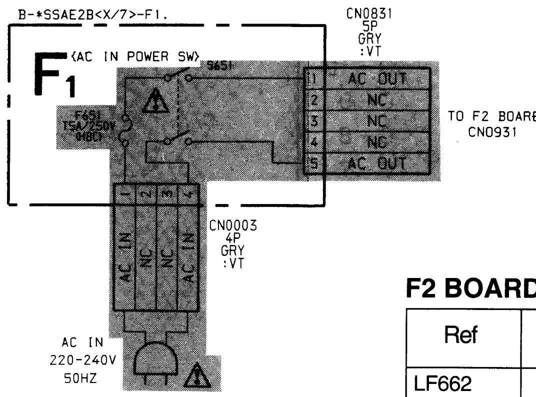

1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
H
I
J
H1
CONTROL SW, AUDIO OUT, Y-CHROMA OUT HEADPHONE IN
MODE
+
–
S081
S082
S083
R081 10k :CHIP
R082 4.7k :CHIP
R083 2.2k :CHIP
R084 1.5k 1/8W :CHIP
R085 1.5k 1/8W :CHIP
R
L
VIDEO
J81 S-3P
CN1008 10P YEL :S-MICRO
10 LC
9 FR R OUT
8 GND
7 FR L OUT
6 GND
5 FR V OUT
4 GND
3 FR C OUT
2 GND
1 FR Y OUT
TO A BOARD CN5108
3 HP L IN
2 GND
1 HP R IN
TO A BOARD CN0108
CN1008 3P YEL S-MICRO
AUDIO L
AUDIO R
L081 10μH
L082 10μH
J82
HEADPHONE
EP
C083 0.022 B:CHIP
C087 0.022 B:CHIP
B-:SSAE2B<A/4>-H1.
H2
(SIRCS RECEIVER, INDICATOR)
A
D093 LD-201VR AUDIO
B
D094 LD-201VR AUDIO
D092 LD-201VR
RES
IC091 SBX1610-11
4.9
+5V
R091 470
7 GND
6 STBY 5V
5 LED REC
4 LED RESP
3 LED B
2 LED A
1 SIRCS
CN1132 7P RED :S-MICRO
TO M2 BOARD CN1432
B-*SSAE2B<X/7>-H2.
TO F1 BOARD CN0831
CN0931 5P WHT :VH
1 AC IN
2 NC
3 NC
4 NC
5 AC IN
C661 0.47 300V AC
LF661 LFT
LF662 *
R662 *
R661 *
R663 1M 1/2W
R664 1.8 10W
R669 1.8 10W
C662 0.33 300V AC
C666 0.0022 400V
C668 JW 10MM
JW051 5MM
JW052 5MM
MTZ
F2 (LINE FILTER, RELAY SW.)
B-*SSAE2B<X/7>-F1.
F1 (AC IN POWER SW)
S651
F651 T5A/250V (H8C)
CN0831 5P GRY :VT
1 AC OUT
2 NC
3 NC
4 NC
5 AC OUT
TO F2 CN0
CN0003 4P GRY :VT
1 AC IN
2 NC
3 NC
4 AC IN
AC IN 220-240V 50HZ

F2 BOA

Ref
LF662
R661
R662

H1 [CONTROL SW, AUDIO OUT Y - CHROMA OUT, HEADPHONE] **H2** [SIRCS RECEIVER INDICATOR] **F2** [LINE FILTER, RELAY SW] **F1** [A

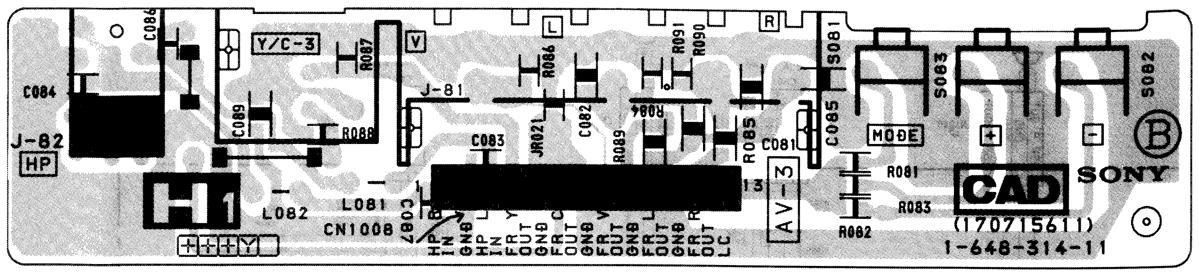

6
7
8
9
10
11
12
13
CN0931 5P WHT :VH
AC IN
NC
NC
NC
AC IN
LF661 LFT
R662
LF662
R661
C661 0.47 300V :AC
R663 1M 1/2W
R664 1.8 10W
C662 0.33 300V :AC
R669 1.8 10W
C664 0.0022 400V
R665 8.2M 1W
JW051 5MM
JW052 5MM
C668 JW 10MM
C672 0.0047 250V
C673 0.0047 250V
D663 D4SB60L-F MAIN-RECT
C674 330 400V
THP661
CN0925 6P WHT :VH
AC OUT
NC
NC
+300V
NC
PRIM.GND
TO D BOARD CN0525
DGC CHK
DGC CHK
CN0007 2P WHT :MINI
JW054 5MM
DGC
NC
DGC
CN0005 3P WHT :MINI
GND
TO D BOARD CN0529
CN0929 1P WHT :MINI
D661 1SS133T HIGH-VOLT PROT
R671 1k :FPRD
C666 330μF
RY661
+17.5V
D664 MTZJ-T-77-9.1 PROTECT
R666 100 :FPRD
R667 12k
R668 27k
C667 22
17.6
0
Q661 2SC2412K RELAY-SW
CN0924 3P WHT :S-MICRO
+17.5V
GND
N.C.
TO D BOARD CN0524
F2 (LINE FILTER, RELAY SW.)
B-:SSAE2B<A/4>-F2.


B-*SSAE2B<X/7>-F1.
F1
(AC IN POWER SW)
S651
F651 T5A/250V (HBC)
CN0831 5P GRY :VT
AC OUT
NC
NC
NC
AC OUT
TO F2 BOARD CN0931
CN0003 4P GRY :VT
AC IN
NC
NC
AC IN
AC IN 220-240V 50HZ

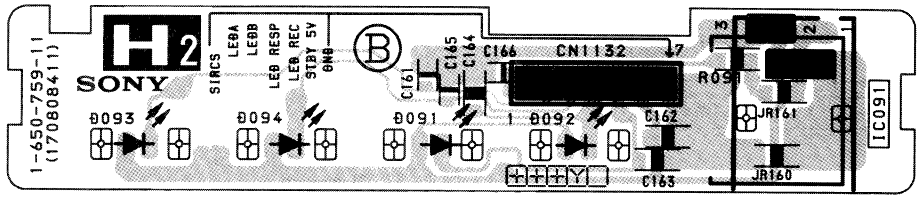
F2 BOARD * MARK

Ref	A2941A	A2941B	A2941D	A2943E	A294IK	A2942U
LF662	LFT	-	LFT	-	-	-
R661	-	JW 10MM	-	JW 10MM	JW 10MM	JW 10MM
R662	-	JW 10MM	-	JW 10MM	JW 10MM	JW 10MM

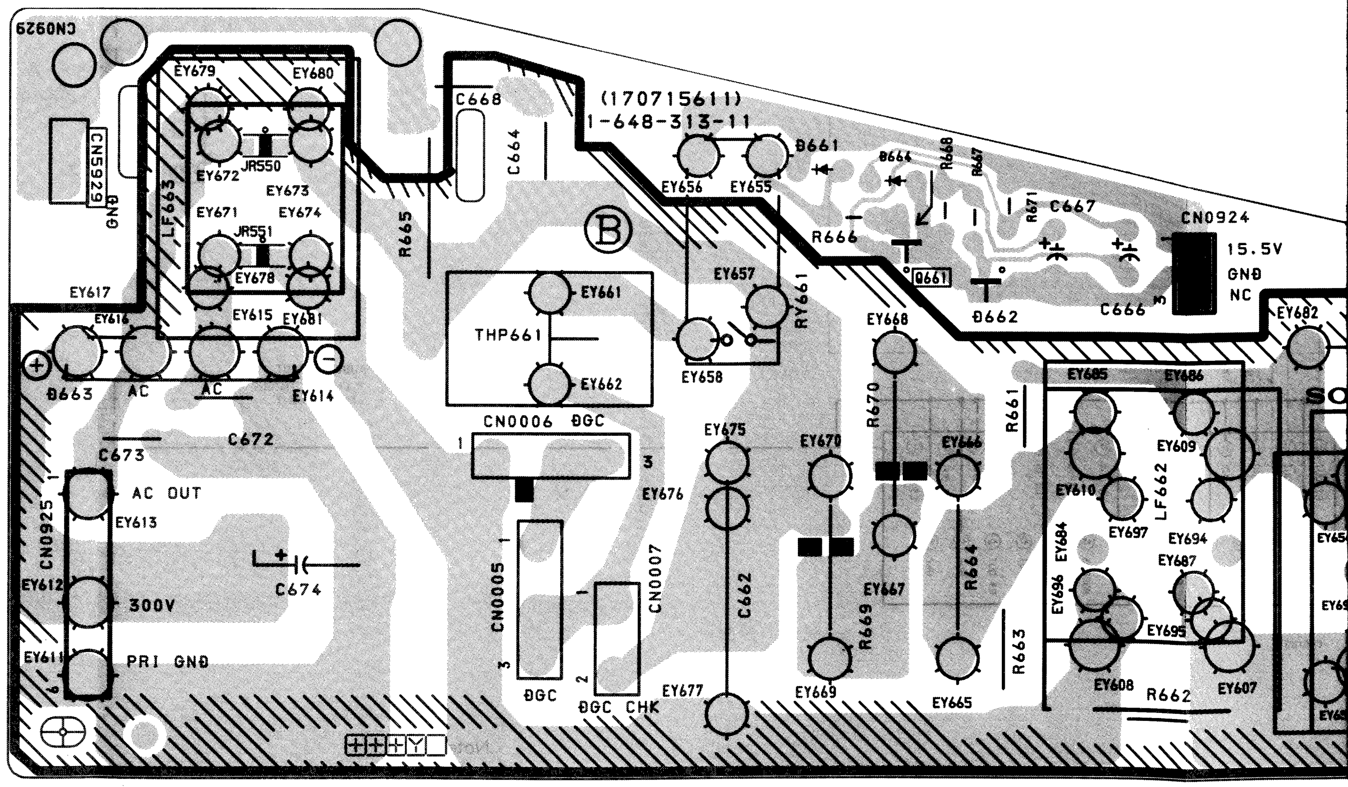
- H1 BOARD -

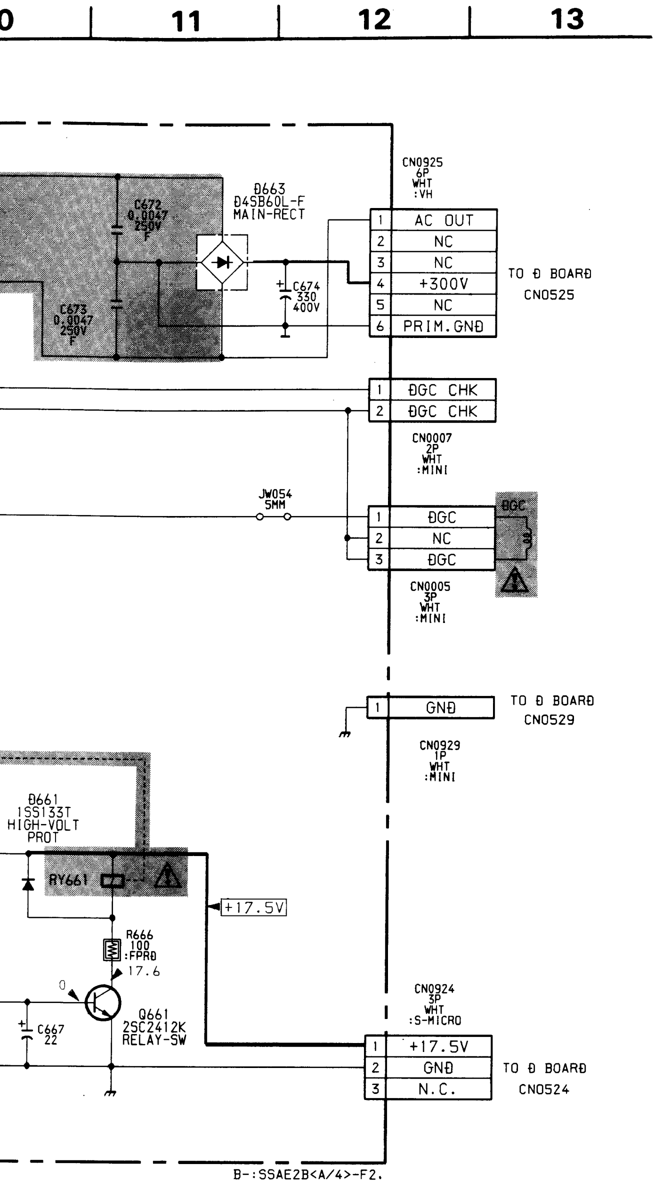

C084
J-82
HP
Y/C-3
R087
V
J-81
L
R086
C082
R091
R090
R
S081
S083
S082
C089
R088
C083
JR021
R089
R084
R085
C081
C085
MODE
+
-
R081
R083
R082
CAD
SONY
(170715611)
1-648-314-11
H1
L082
L081
CN1008
AV-3
HP IN
GND
HP L
IN FR
IN FL
OUT Y
GND
OUT C
GND
FR V
OUT
GND
FR L
OUT R
GND
LC

- H2 BOARD -


H2
SONY
1-650-759-11 (170808411)
SIRCS
LEDA
LEDB
LED RESP
LED REC
STBY 5V
GND
C165
C164
C166
CN1132
C161
R091
JR161
IC091
D093
D094
D091
D092
C162
C163
JR160

- F2 BOARD -

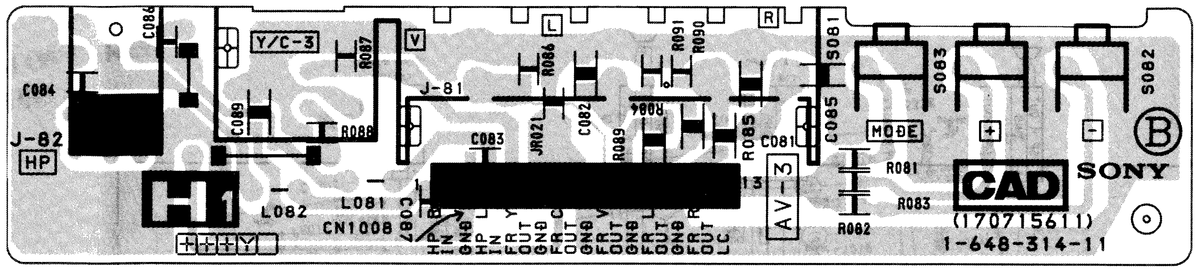

CN0929
CN5929
GND
EY679
EY680
JR550
EY672
EY673
EY671
EY674
JR551
EY678
EY615
EY681
EY617
EY616
LF663
C668
C664
(170715611)
1-648-313-11
D661
D666
R668
R667
R671
C667
EY656
EY655
R665
EY661
THP661
EY662
EY657
EY658
RY661
R666
Q661
D662
C666
CN0924
15.5V
GND
NC
EY682
D663
AC
AC
EY614
C672
C673
AC OUT
CN0925
EY613
EY612
300V
C674
EY611
PRI GND
CN0006 DGC
EY676
EY675
CN0005
CN0007
C662
DGC
DGC CHK
EY677
EY670
R670
EY668
EY666
EY667
R669
R664
EY669
EY665
R661
R663
EY685
EY686
EY609
EY610
LF662
EY697
EY694
EY684
EY696
EY687
EY695
EY608
R662
EY607


11
12
13
CN0925 6P WHT :VH
Đ663 Đ4SB60L-F MAIN-RECT
C672 0.0047 250V F
C673 0.0047 250V F
C674 330 400V
1 AC OUT
2 NC
3 NC
4 +300V
5 NC
6 PRIM.GNĐ
TO Đ BOARD CN0525
1 ĐGC CHK
2 ĐGC CHK
CN0007 2P WHT :MINI
JW054 5MM
1 ĐGC
2 NC
3 ĐGC
ĐGC
CN0005 3P WHT :MINI
1 GNĐ
TO Đ BOARD CN0529
CN0929 1P WHT :MINI
Đ661 1SS133T HIGH-VOLT PROT
RY661
+17.5V
R666 100 :FPRĐ
17.6
0
Q661 2SC2412K RELAY-SW
C667 22
CN0924 3P WHT :S-MICRO
1 +17.5V
2 GNĐ
3 N.C.
TO Đ BOARD CN0524
B-:SSAE2B<A/4>-F2.

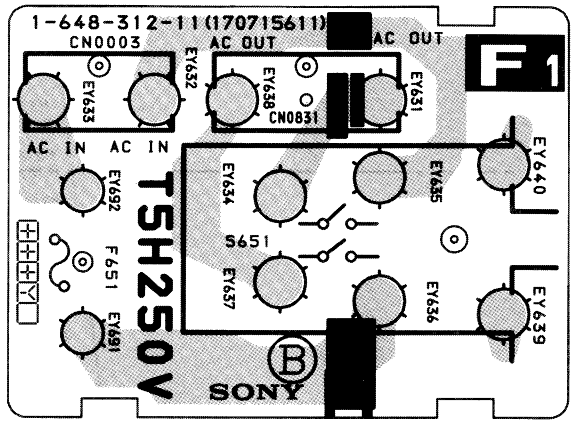
1B	A2941D	A2943E	A294IK	A2942U
	LFT	-	-	-
MM	-	JW 10MM	JW 10MM	JW 10MM
MM	-	JW 10MM	JW 10MM	JW 10MM

H1 [CONTROL SW, AUDIO OUT Y – CHROMA OUT, HEADPHONE] **H2** [SIRCS RECEIVER INDICATOR] **F2** [LINE FILTER, RELAY SW] **F1** [AC IN POWER SW]

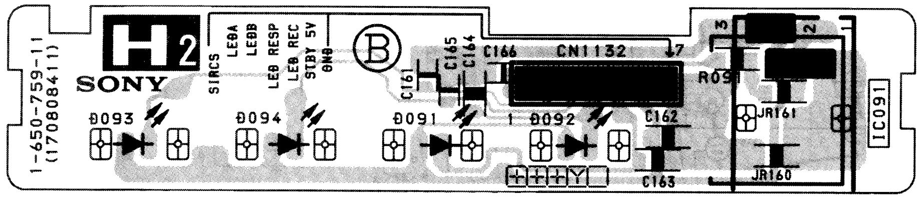
– H1 BOARD –


H1
Y/C-3
J-81
J-82
HP
C084
C086
C089
R087
R088
L081
L082
CN1008
C087
C083
JR021
C082
R089
R086
R084
R091
R090
R085
C081
C085
S081
S083
S082
MODE
R081
R083
R082
AV-3
CAD
SONY
(170715611)
1-648-314-11

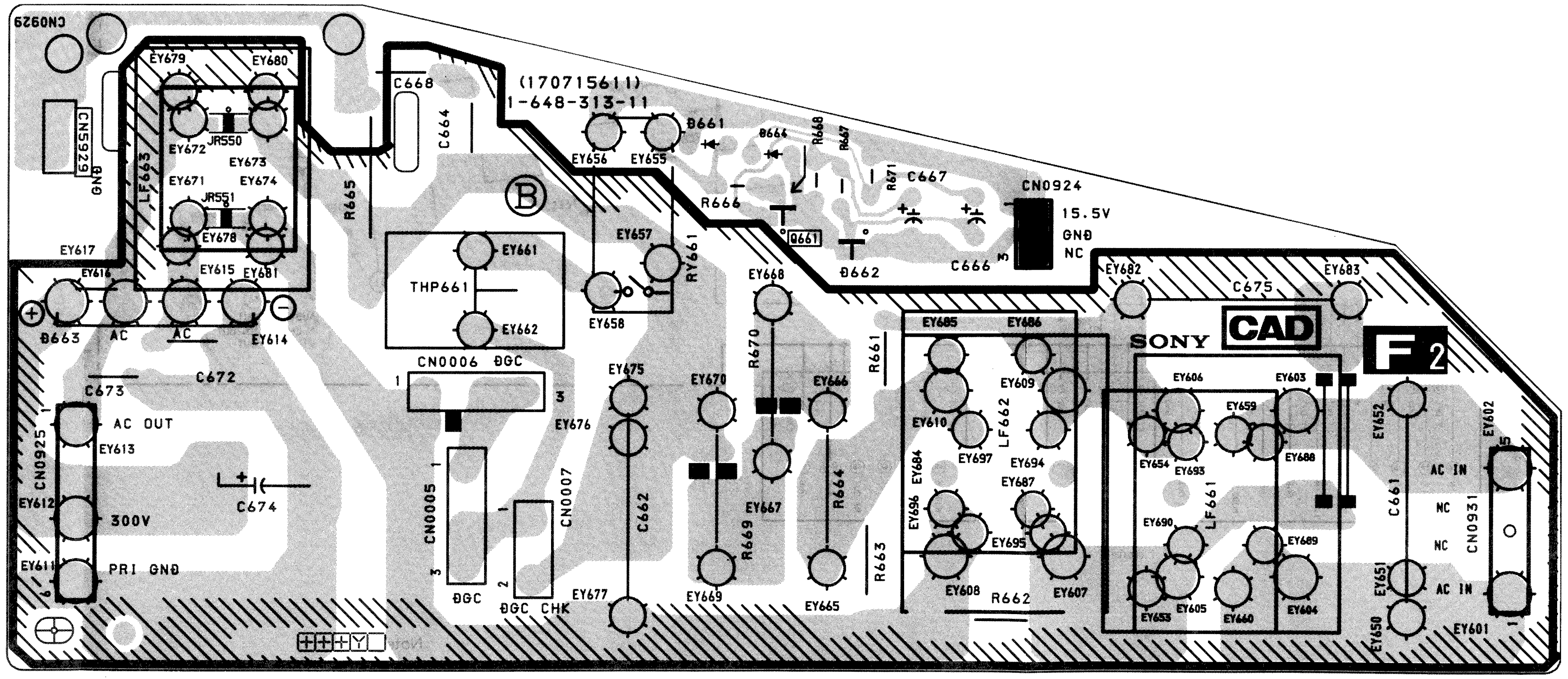
– F1 BOARD –


1-648-312-11(170715611)
CN0003
AC OUT
F1
EY633
EY632
EY638
EY631
CN0831
AC IN
AC IN
EY692
T5H250V
EY634
EY635
EY640
S651
F651
EY691
EY637
EY636
EY639
SONY

– H2 BOARD –

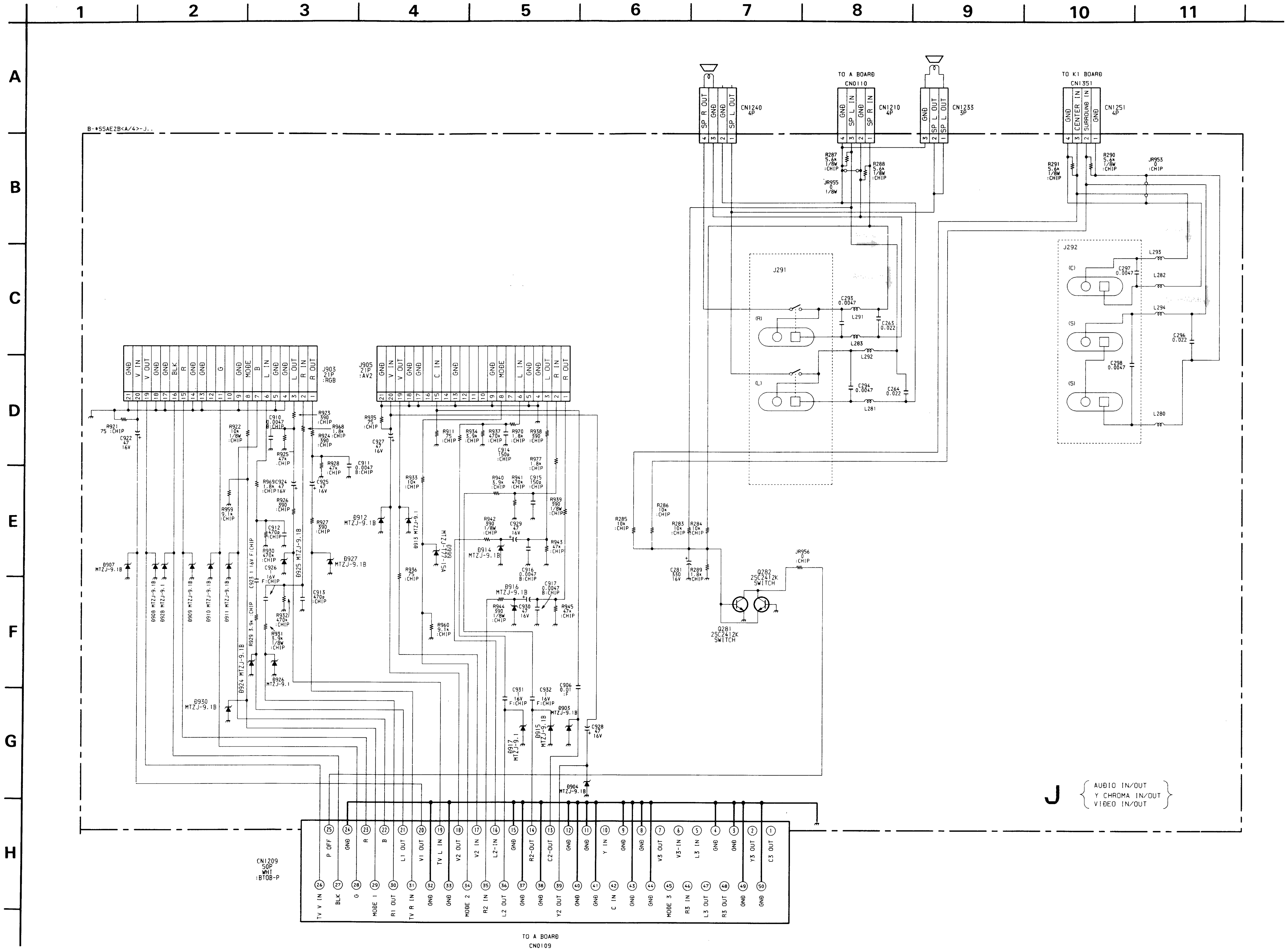

H2
SONY
1-650-759-11
(170808411)
SIRCS
LEĐA
LEĐB
LEĐ RESP
LEĐ REC
STBY 5V
GNĐ
C161
C165
C164
C166
CN1132
R091
Đ093
Đ094
Đ091
Đ092
C162
C163
JR161
JR160
IC091

– F2 BOARD –

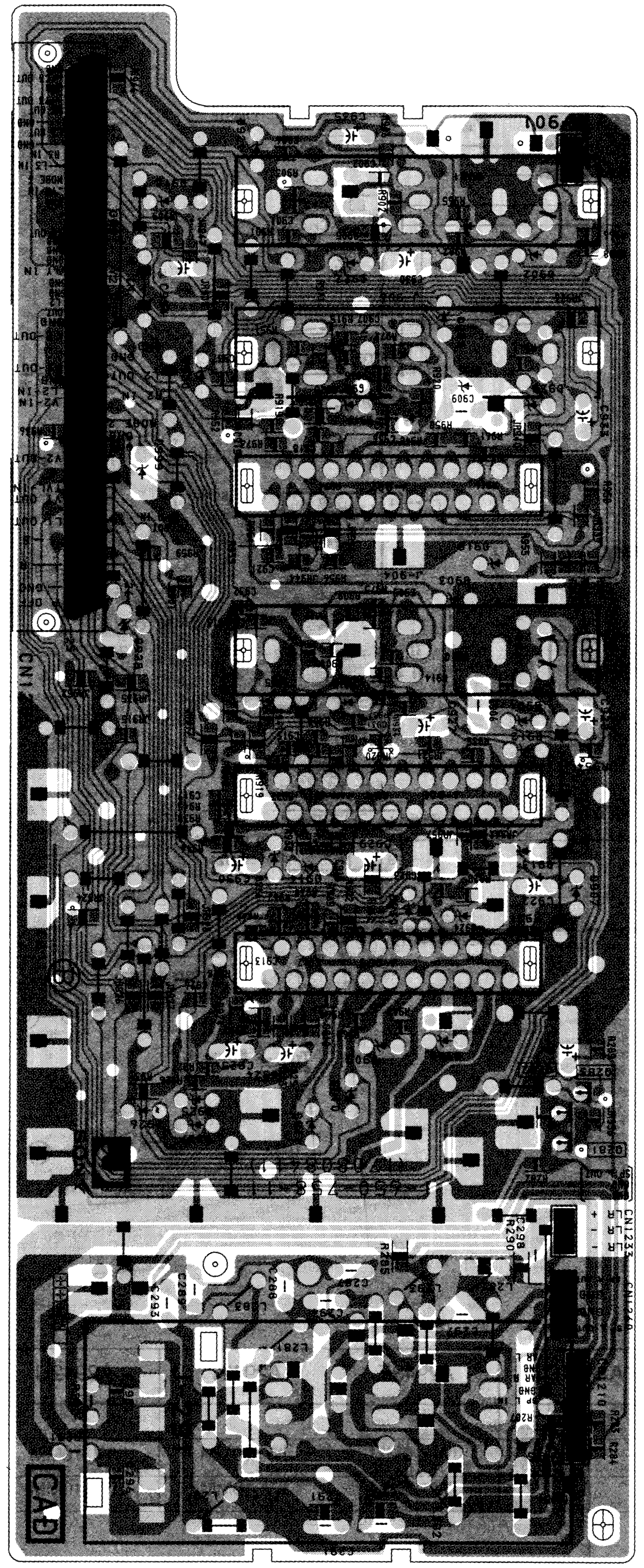

CN0929
EY679
EY680
JR550
EY672
EY673
EY671
EY674
JR551
EY678
LF663
CN5929
GNĐ
C668
C664
R665
(170715611)
1-648-313-11
EY656
EY655
Đ661
Đ664
R668
R667
R671
C667
R666
CN0924
15.5V
GNĐ
NC
EY617
EY616
EY615
EY681
Đ663
AC
AC
EY614
EY661
THP661
EY662
EY657
RY661
Q661
Đ662
C666
EY658
EY668
R670
R661
EY682
C675
EY683
SONY
CAD
F2
EY685
EY686
EY609
LF662
EY610
EY697
EY694
EY687
EY606
EY603
EY659
EY654
EY693
EY688
EY652
EY602
LF661
C661
AC IN
NC
NC
CN0931
AC IN
C673
C672
AC OUT
EY613
CN0925
EY612
300V
EY611
PRI GNĐ
C674
CN0006 ĐGC
EY676
EY675
EY670
EY666
EY667
R664
EY684
EY696
EY695
EY690
EY689
CN0005
CN0007
C662
R669
R663
ĐGC
ĐGC CHK
EY677
EY669
EY665
EY608
R662
EY607
EY653
EY605
EY660
EY604
EY651
EY650
EY601

J [AUDIO IN/OUT
Y – CHROMA IN/OUT
VIDEO IN/OUT]

A [TUNER AUDIO CONTROL,
AV SW, R.G.B. JUNGLE, Y


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
B-*S5AE2B<A/4>-J..
CN1240 4P
SP R OUT
GND
GND
SP L OUT
TO A BOARD CN0110
CN1210 4P
GND
SP L IN
GND
SP R IN
CN1233 3P
GND
SP L OUT
SP L OUT
TO K1 BOARD CN1351
CN1251 4P
GND
CENTER IN
SURROUND IN
GND
J291
J292
J903 21P :RGB
J905 21P :AV2
GND
V IN
V OUT
BLK
R
G
MODE
B
L IN
L OUT
R IN
R OUT
C IN
Q282 2SC2412K SWITCH
Q281 2SC2412K SWITCH
CN1209 50P WHT :BTOB-P
P OFF
TV V IN
TV L IN
TV R IN
MODE 1
MODE 2
MODE 3
R1 OUT
R2 IN
R2-OUT
R3 IN
R3 OUT
L1 OUT
L2-IN
L2 OUT
L3 OUT
V1 OUT
V2 OUT
V2 IN
V3 OUT
V3-IN
Y IN
Y2 OUT
Y3 OUT
C2-OUT
C3 OUT
TO A BOARD CN0109
J
AUDIO IN/OUT
Y CHROMA IN/OUT
VIDEO IN/OUT

– J BOARD –

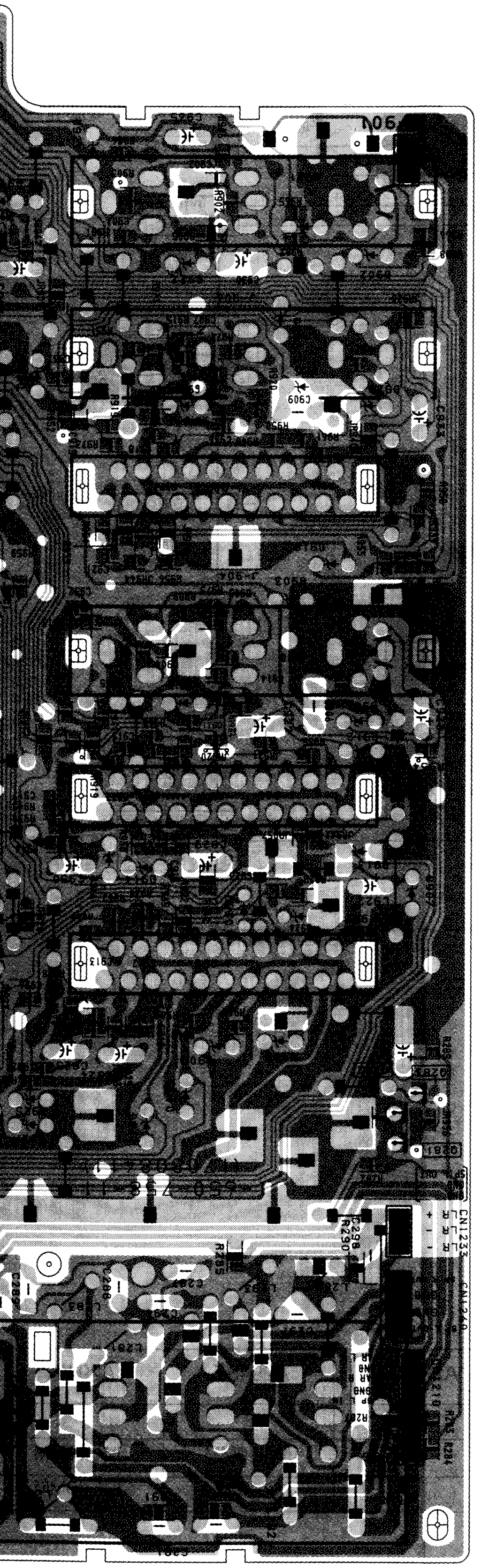

A06
CN1
CN1233
CN1210
C.A.D

Note :

- ▨ : Pattern from the side which enables seeing.
- ▩ : Pattern of the rear side.

D IN/OUT
HROMA IN/OUT
D IN/OUT

A TUNER AUDIO CONTROL, AUDIO AMP
AV SW, R.G.B. JUNGLE, Y/C PROCESSOR



IC

IC	Location
IC072	B-6
IC201	C-6
IC202	C-4
IC251	D-4
IC261	D-2
IC301	A-8
IC302	A-10
IC304	C-10
IC401	C-2
IC402	D-2
IC681	D-9
IC684	C-4
IC685	E-8

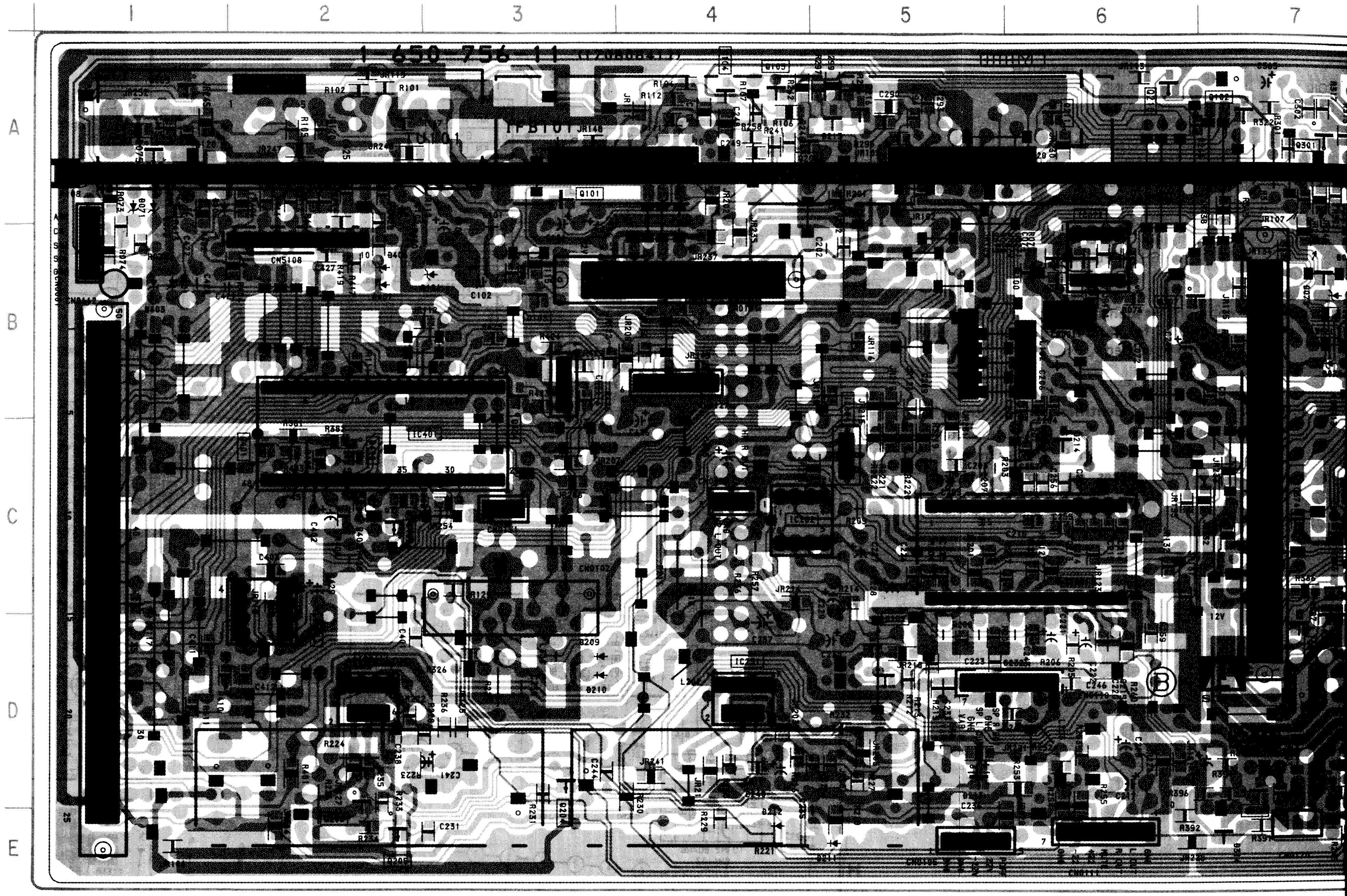
TRANSISTOR

TRANSISTOR	Location
Q071	D-8
Q101	A-3
Q102	A-7
Q103	A-3
Q201	D-5
Q202	D-5
Q203	A-4
Q204	D-3
Q205	E-2
Q206	D-2
Q207	B-6
Q209	E-7
Q210	A-6
Q301	A-7
Q302	B-7
Q303	D-10
Q304	D-10
Q305	A-8
Q306	D-10
Q308	C-9
Q309	C-9
Q311	C-8
Q312	C-8
Q313	B-8
Q314	C-7
Q315	D-7
Q401	C-2
Q402	C-2
Q403	C-2
Q404	B-3
Q581	B-9
Q582	B-9
Q610	E-9
Q681	E-7
Q682	D-9

DIODE

DIODE	Location
D068	B-7
D069	A-1
D071	A-1
D073	A-1
D075	A-1
D077	B-7
D078	B-7
D079	B-7
D101	B-2
D206	D-7
D207	E-7
D208	D-7
D209	D-3
D210	D-3
D211	E-5
D212	E-4
D213	D-5
D214	C-6
D301	B-9
D302	A-9
D304	B-10
D305	C-9
D306	D-10
D307	D-10
D308	D-10
D311	C-9
D312	C-8
D313	C-7
D381	C-8
D401	B-1
D403	B-1
D405	A-1
D406	B-2
D407	B-2
D571	B-9
D681	E-8
D683	D-9

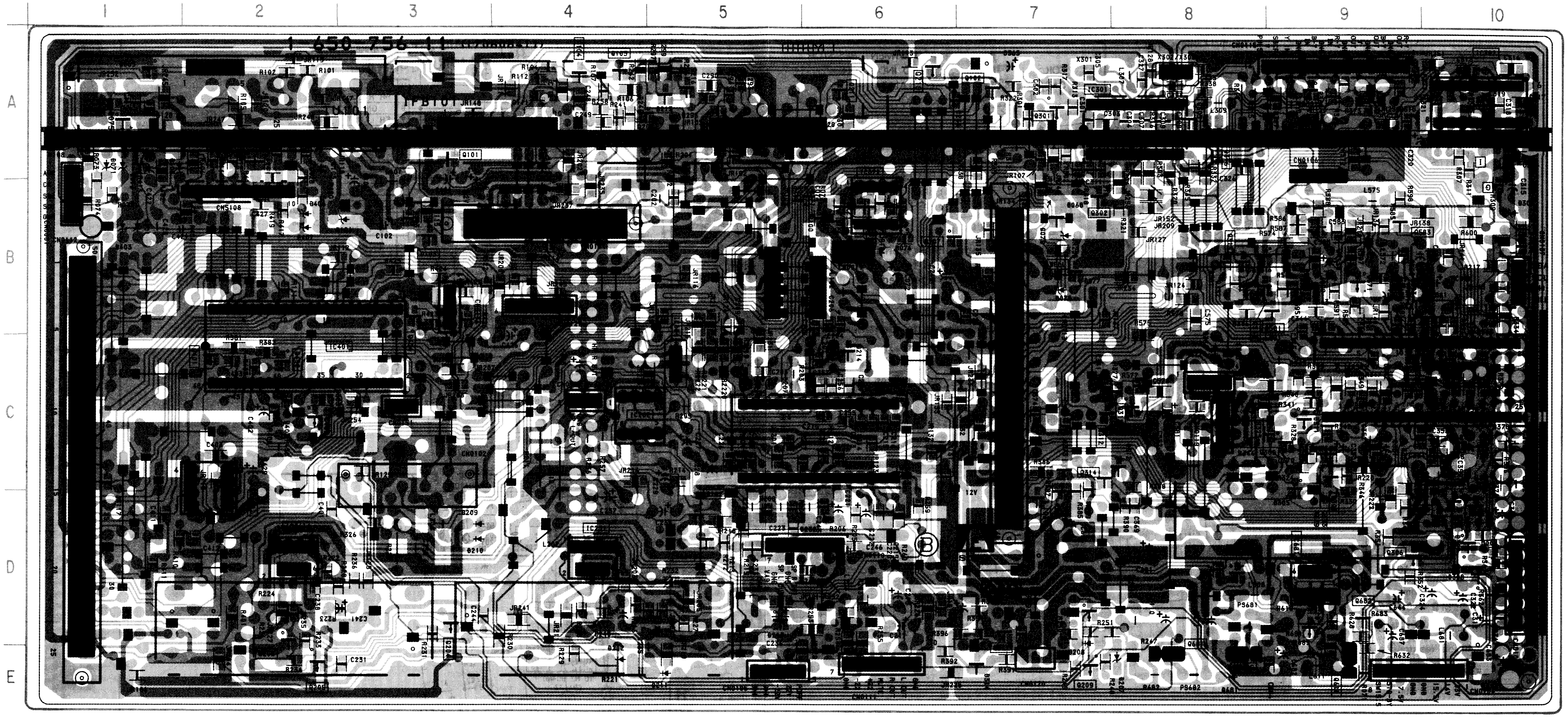
– A BOARD –



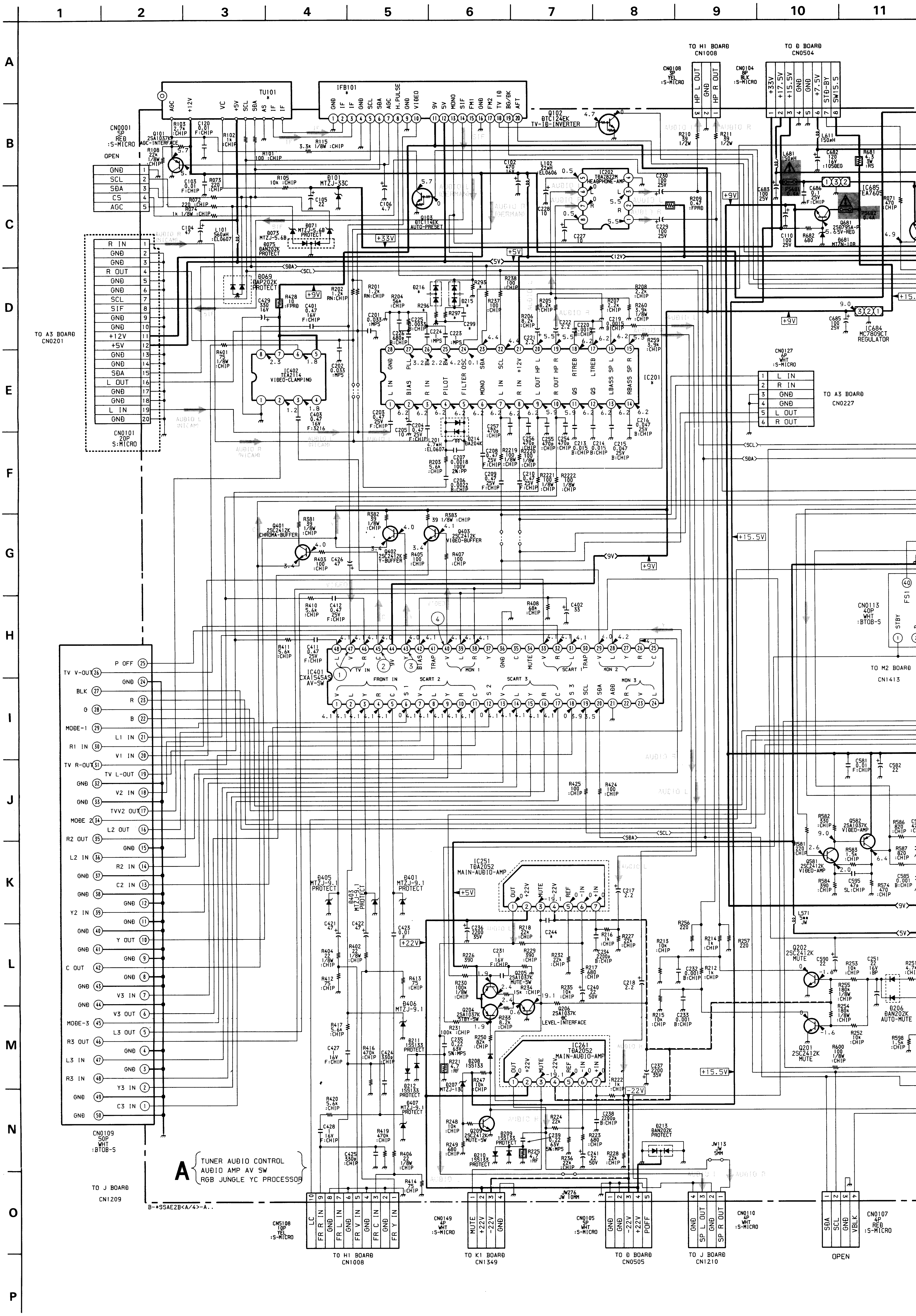
404	B – 3
581	B – 9
582	B – 9
610	E – 9
681	E – 7
682	D – 9

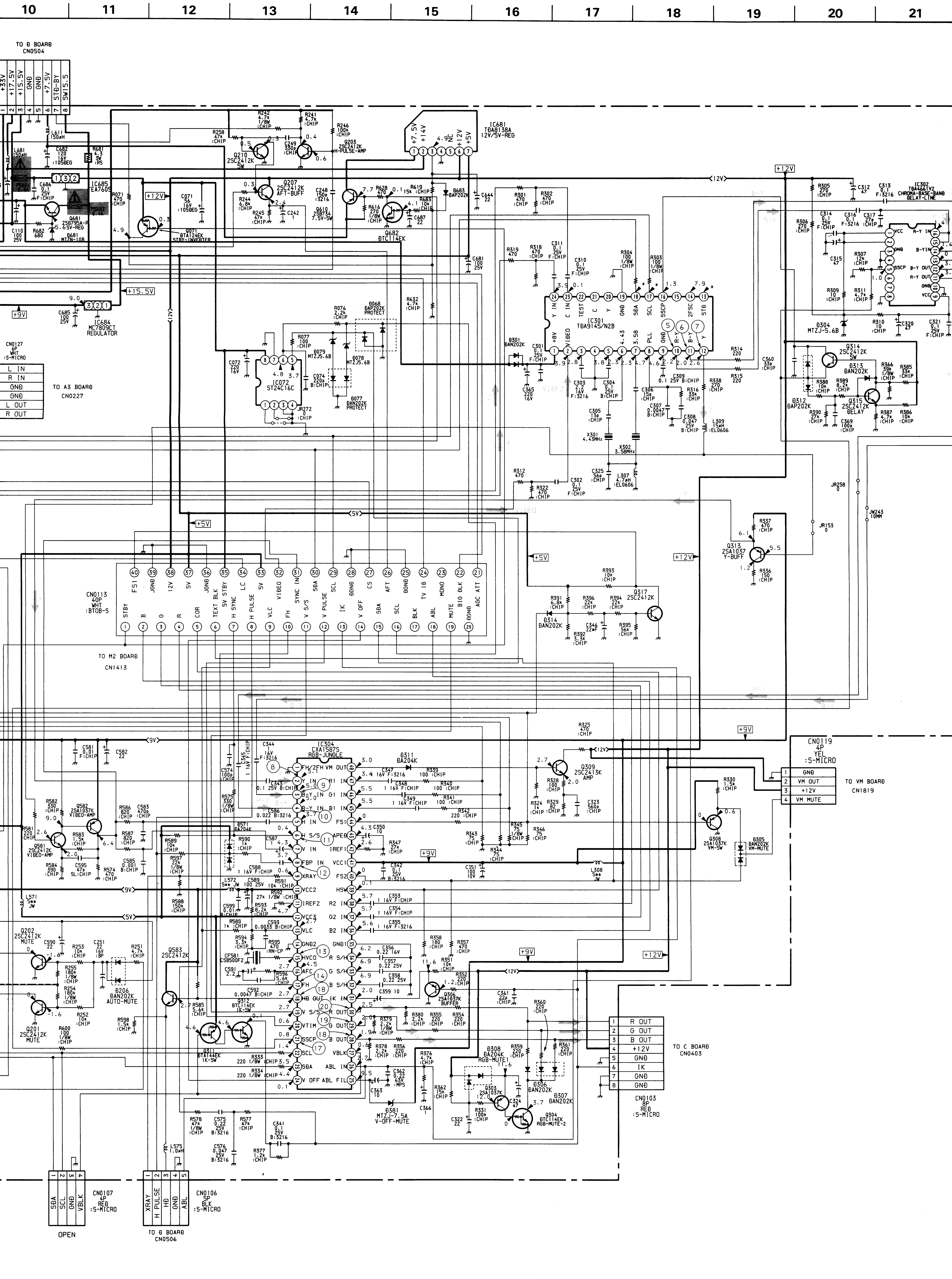
DIODE	
68	B – 7
69	A – 1
71	A – 1
73	A – 1
75	A – 1
77	B – 7
78	B – 7
79	B – 7
01	B – 2
06	D – 7
07	E – 7
08	D – 7
09	D – 3
10	D – 3
11	E – 5
12	E – 4
13	D – 5
14	C – 6
01	B – 9
02	A – 9
04	B – 10
05	C – 9
06	D – 10
07	D – 10
08	D – 10
11	C – 9
12	C – 8
13	C – 7
31	C – 8
01	B – 1
03	B – 1
05	A – 1
06	B – 2
07	B – 2
71	B – 9
31	E – 8
33	D – 9

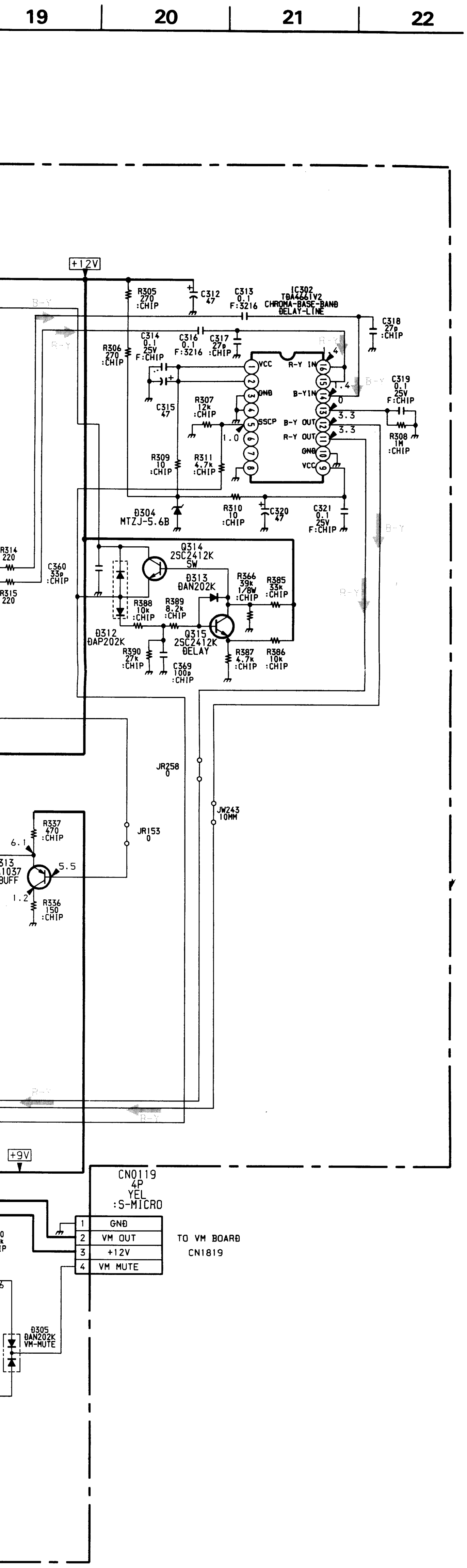
– A BOARD –



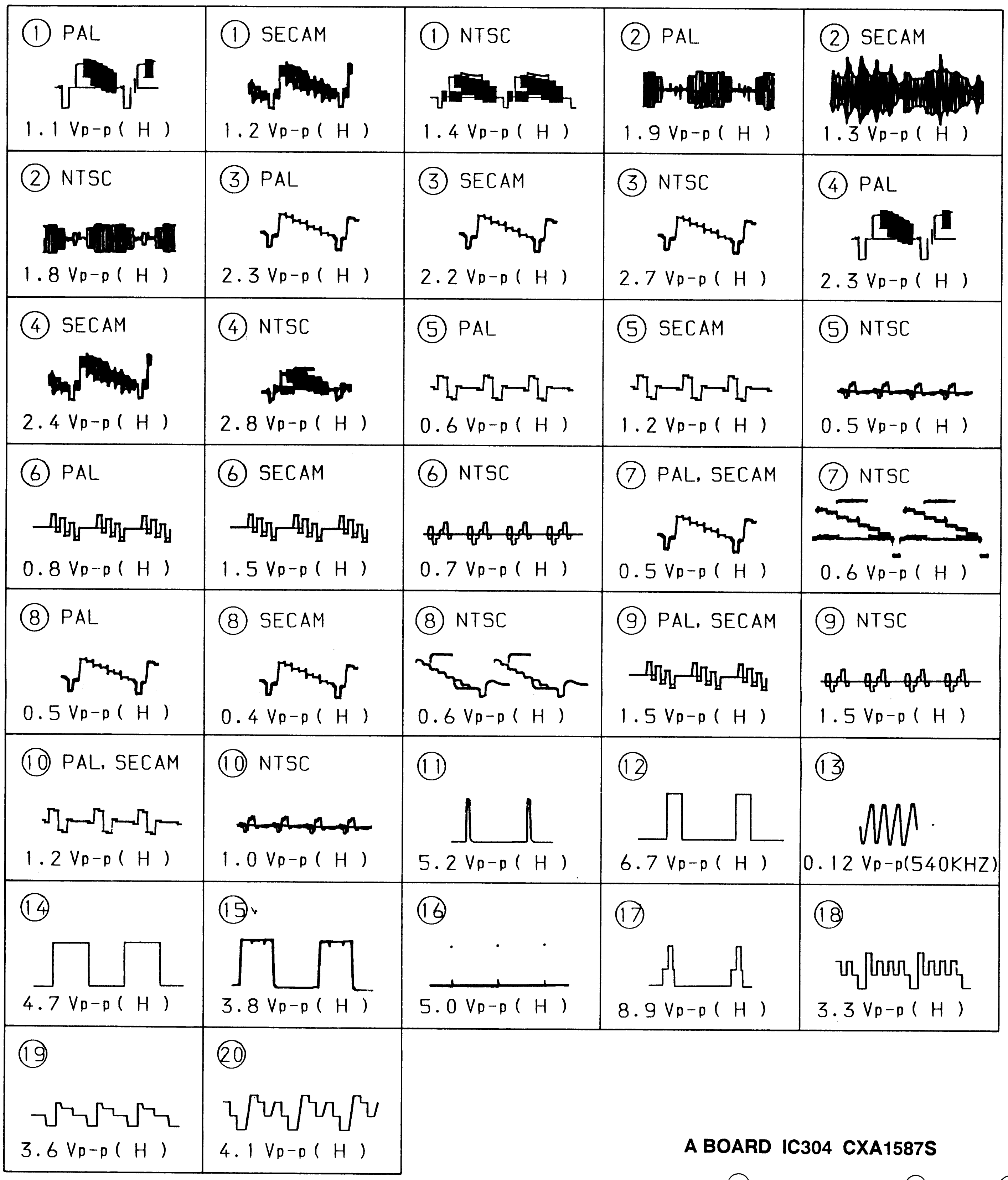
Note :
- ▒ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.


A
TUNER AUDIO CONTROL
AUDIO AMP AV SW
RGB JUNGLE YC PROCESSOR
B-*SSAE2B<A/4>-A..
TU101
IFB101
TO A3 BOARD CN0201
CN0101 20P S:MICRO
CN0001 5P RED :S-MICRO
OPEN
TO H1 BOARD CN1008
TO D BOARD CN0504
CN0108 3P YEL :S-MICRO
CN0104 8P BLK :S-MICRO
Q101 2SA1037K AGC-INTERFACE
Q102 DTC124EK TV-ID-INVERTER
Q103 DTC114EK AUTO-PRESET
IC202 TDA7822M HEADPHONE-AMP
IC685 TEA7605
Q681 2SD795A-R 5.65V-REG
IC684 MC7809CT REGULATOR
D069 DAP202K PROTECT
D073 MTZJ-5.6B
D075 DAN202K PROTECT
D101 MTZJ-33C
IC402 TEA2114 VIDEO-CLAMPING
IC201
D214 DA204K
CN0127 6P WHT :S-MICRO
TO A3 BOARD CN0227
Q401 2SC2412K CHROMA-BUFFER
Q402 2SC2412K Y-BUFFER
Q403 2SC2412K VIDEO-BUFFER
IC401 CXA1545AS AV-SW
CN0113 40P WHT :BTOB-S
TO M2 BOARD CN1413
CN0109 50P WHT :BTOB-S
TO J BOARD CN1209
IC251 TDA2052 MAIN-AUDIO-AMP
IC261 TDA2052 MAIN-AUDIO-AMP
Q204 2SA1037K STBY-SW
Q205 2SA1037K MUTE-SW
Q206 2SA1037K LEVEL-INTERFACE
Q209 2SC2412K MUTE-SW
Q581 2SC2412K VIDEO-AMP
Q582 2SA1037K VIDEO-AMP
Q201 2SC2412K MUTE
Q202 2SC2412K MUTE
D206 DAN202K AUTO-MUTE
D213 DAN202K PROTECT
JW113 JW 5MM
JW276 JW 10MM
CN5108 10P YEL :S-MICRO
TO H1 BOARD CN1008
CN0149 4P WHT :S-MICRO
TO K1 BOARD CN1349
CN0105 5P WHT :S-MICRO
TO D BOARD CN0505
CN0110 4P WHT :S-MICRO
TO J BOARD CN1210
CN0107 4P RED :S-MICRO
OPEN
+33V
+5V
+9V
+12V
+15.5V
+22V
-22V
SDA
SCL
AUDIO L
AUDIO R
1 2 3 4 5 6 7 8 9 10 11
A B C D E F G H I J K L M N O P


10
11
12
13
14
15
16
17
18
19
20
21
TO D BOARD CN0504
+33V
+17.5V
+15.5V
GND
GND
+7.5V
STD-BY
SW15.5
IC685 EA7609
IC684 MC7809CT REGULATOR
Q681 2SB795A-P 5.6V-REG
Q071 DTA124EK STBY-INVERTER
Q210 2SC2412K SW
Q203 2SC2412K H-PULSE-AMP
Q207 2SC2412K AFT-BUFF
Q610 2SB734 7.5V-SW
Q682 DTC114EK
IC681 TDA8138A 12V/5V-REG
IC301 TDA9145/N2B
IC302 TDA4661V2 CHROMA-BASE-BAND DELAY-LINE
IC072 ST24C16C
D068 DAP202K PROTECT
D077 DAN202K PROTECT
D079 MTZJ5.6B
D078 MTZJ5.6B
D304 MTZJ-5.6B
Q314 2SC2412K SW
Q313 DAN202K
Q315 2SC2412K DELAY
D312 DAP202K
X301 4.43MHz
X302 3.58MHz
Q313 2SA1037 Y-BUFF
Q317 2SC2412K
D314 DAN202K
CN0127 6P WHT :S-MICRO
L IN
R IN
GND
GND
L OUT
R OUT
TO A3 BOARD CN0227
CN0113 40P WHT :BTOB-S
TO M2 BOARD CN1413
FS1
JGND
12V
5V
JGND
5V STBY
LC
5V
VIDEO
SYNC IN
SDA
SCL
DGND
CS
AFT
DGND
TV ID
MONO
BIG BLK
AGC ATT
STBY
B
G
R
COR
TEXT BLK
H SYNC
H PULSE
VLC
FH
V S/S
V PULSE
IK
V OFF
SDA
SCL
BLK
ABL
MUTE
DGND
IC304 CXA1587S RGB-JUNGLE
Q582 2SA1037K VIDEO-AMP
Q581 2SC2412K VIDEO-AMP
Q202 2SC2412K MUTE
Q201 2SC2412K MUTE
D206 DAN202K AUTO-MUTE
Q583 2SC2412K
Q311 DTA144EK IK-SW
Q312 DTC114EK IK-SW
D311 DAZ04K
D381 MTZJ-7.5A V-OFF-MUTE
Q309 2SC2413K AMP
Q308 2SA1037K VM-SW
D305 DAN202K VM-MUTE
Q306 2SA1037K BUFFER
D308 DAZ04K RGB-MUTE1
Q303 2SA1037K
Q304 DTC114EK RGB-MUTE-2
D306 DAN202K
D307 DAN202K
CN0119 4P YEL :S-MICRO
GND
VM OUT
+12V
VM MUTE
TO VM BOARD CN1819
R OUT
G OUT
B OUT
+12V
GND
IK
GND
GND
TO C BOARD CN0403
CN0103 8P RED :S-MICRO
CN0107 4P RED :S-MICRO
SDA
SCL
GND
VBLK
OPEN
CN0106 5P BLK :S-MICRO
XRAY
H PULSE
HD
GND
ABL
TO D BOARD CN0506
+12V
+15.5V
+9V
+5V
+12V
(12V)
(9V)
(5V)


19
20
21
22
+12V
R305 270 :CHIP
C312 47
C313 0.1 F:3216
IC302 TDA4661V2 CHROMA-BASE-BAND DELAY-LINE
C318 27p :CHIP
C314 0.1 25V F:CHIP
C316 0.1 F:3216
C317 27p :CHIP
R306 270 :CHIP
VCC
R-Y IN
GND
B-YIN
SSCP
B-Y OUT
R-Y OUT
C315 47
R307 12k :CHIP
C319 0.1 25V F:CHIP
R308 1M :CHIP
R309 10 :CHIP
R311 4.7k :CHIP
1.4
0
3.3
3.3
1.0
D304 MTZJ-5.6B
R310 10 :CHIP
C320 47
C321 0.1 25V F:CHIP
B-Y
R-Y
R314 220
R315 220
C360 33p :CHIP
Q314 2SC2412K SW
D313 DAN202K
R366 39k 1/8W :CHIP
R385 33k :CHIP
R388 10k :CHIP
R389 8.2k :CHIP
D312 DAP202K
Q315 2SC2412K DELAY
R390 27k :CHIP
C369 100p :CHIP
R387 4.7k :CHIP
R386 10k :CHIP
JR258 0
JR153 0
JW243 10MM
R337 470 :CHIP
6.1
5.5
1.2
313
1037
BUFF
R336 150 :CHIP
+9V
CN0119 4P YEL :S-MICRO
1 GND
2 VM OUT
3 +12V
4 VM MUTE
TO VM BOARD CN1819
D305 DAN202K VM-MUTE

WAVEFORMS A BOARD


① PAL 1.1 Vp-p (H)
① SECAM 1.2 Vp-p (H)
① NTSC 1.4 Vp-p (H)
② PAL 1.9 Vp-p (H)
② SECAM 1.3 Vp-p (H)
② NTSC 1.8 Vp-p (H)
③ PAL 2.3 Vp-p (H)
③ SECAM 2.2 Vp-p (H)
③ NTSC 2.7 Vp-p (H)
④ PAL 2.3 Vp-p (H)
④ SECAM 2.4 Vp-p (H)
④ NTSC 2.8 Vp-p (H)
⑤ PAL 0.6 Vp-p (H)
⑤ SECAM 1.2 Vp-p (H)
⑤ NTSC 0.5 Vp-p (H)
⑥ PAL 0.8 Vp-p (H)
⑥ SECAM 1.5 Vp-p (H)
⑥ NTSC 0.7 Vp-p (H)
⑦ PAL, SECAM 0.5 Vp-p (H)
⑦ NTSC 0.6 Vp-p (H)
⑧ PAL 0.5 Vp-p (H)
⑧ SECAM 0.4 Vp-p (H)
⑧ NTSC 0.6 Vp-p (H)
⑨ PAL, SECAM 1.5 Vp-p (H)
⑨ NTSC 1.5 Vp-p (H)
⑩ PAL, SECAM 1.2 Vp-p (H)
⑩ NTSC 1.0 Vp-p (H)
⑪ 5.2 Vp-p (H)
⑫ 6.7 Vp-p (H)
⑬ 0.12 Vp-p(540KHZ)
⑭ 4.7 Vp-p (H)
⑮ 3.8 Vp-p (H)
⑯ 5.0 Vp-p (H)
⑰ 8.9 Vp-p (H)
⑱ 3.3 Vp-p (H)
⑲ 3.6 Vp-p (H)
⑳ 4.1 Vp-p (H)

Voltages indicated with the mark ※ on the schematic diagram are shown in the table below.

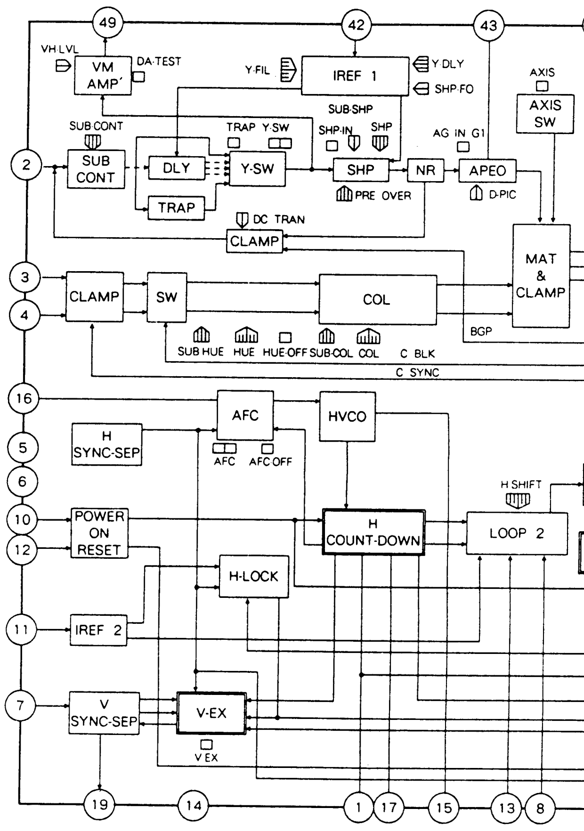
A BOARD

		PAL	SECAM	NTSC3.58	NTSC4.43
IC301	⑬	0.0	0.0	4.8	4.9
	⑮	0.0	5.0	5.0	0.0
	⑰	4.7	4.2	3.6	4.1
	⑱	4.8	4.4	4.6	4.8
Q301	(B)	0.0	0.0	0.0	1.6
	(C)	5.5	5.5	5.5	0.1
Q305	(B)	0.0	5.5	5.5	0.0
	(C)	0.0	0.0	0.0	1.6

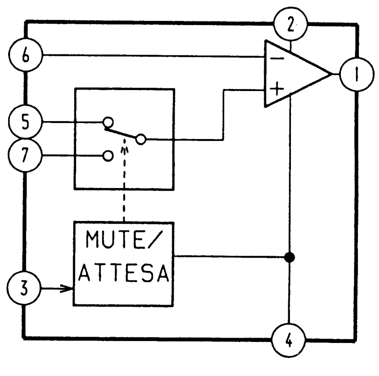
A BOARD * MARK

Ref	A2941A	A2941B	A2941D	A2943E	A2941K	A2942U
C244	1MF	1MF	1MF	1MF	1MF	0.01MF
C299	2.2MF	1MF	2.2MF	2.2MF	2.2MF	2.2MF
C333	-	470PF	-	-	-	-
D215	-	DAN204K	-	-	-	-
D216	-	DAN204K	-	-	-	-
IC201	TDA6612	TDA6612	TDA6612	TDA6612	TDA6612	TDA6622
IFB101	IFH-389	IFH-389F	IFH-389	IFH-389	IFH-389	IFH-395
R293	-	12K	-	-	-	-
R296	-	330	-	-	-	-
R297	-	120	-	-	-	-
R326	-	0	-	-	-	-
TU101	UV916H	UV916H	UV916H	UV916H	UV916H	U944C

A BOARD IC304 CXA1587S

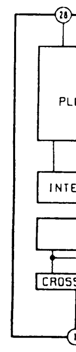

49
42
43
VH LVL
VM AMP'
DA TEST
Y FIL
IREF 1
Y DLY
SHP FO
AXIS
AXIS SW
SUB SHP
SUB CONT
TRAP
Y SW
SHP IN
SHP
AG IN G1
2
SUB CONT
DLY
Y-SW
SHP
NR
APEO
TRAP
PRE OVER
D-PIC
DC TRAN
CLAMP
MAT & CLAMP
3
4
CLAMP
SW
COL
BGP
SUB HUE
HUE
HUE OFF
SUB COL
COL
C BLK
C SYNC
16
AFC
HVCO
5
H SYNC-SEP
AFC
AFC OFF
6
H SHIFT
10
12
POWER ON RESET
H COUNT-DOWN
LOOP 2
H-LOCK
11
IREF 2
7
V SYNC-SEP
V-EX
V EX
19
14
1
17
15
13
8

A BOARD IC251/261 TDA2052

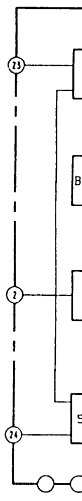

2
6
1
5
7
MUTE/ ATTESA
3
4

A BO

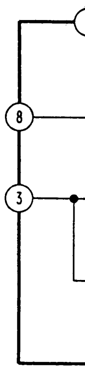
A BO


24
PL
INTE
CROSS

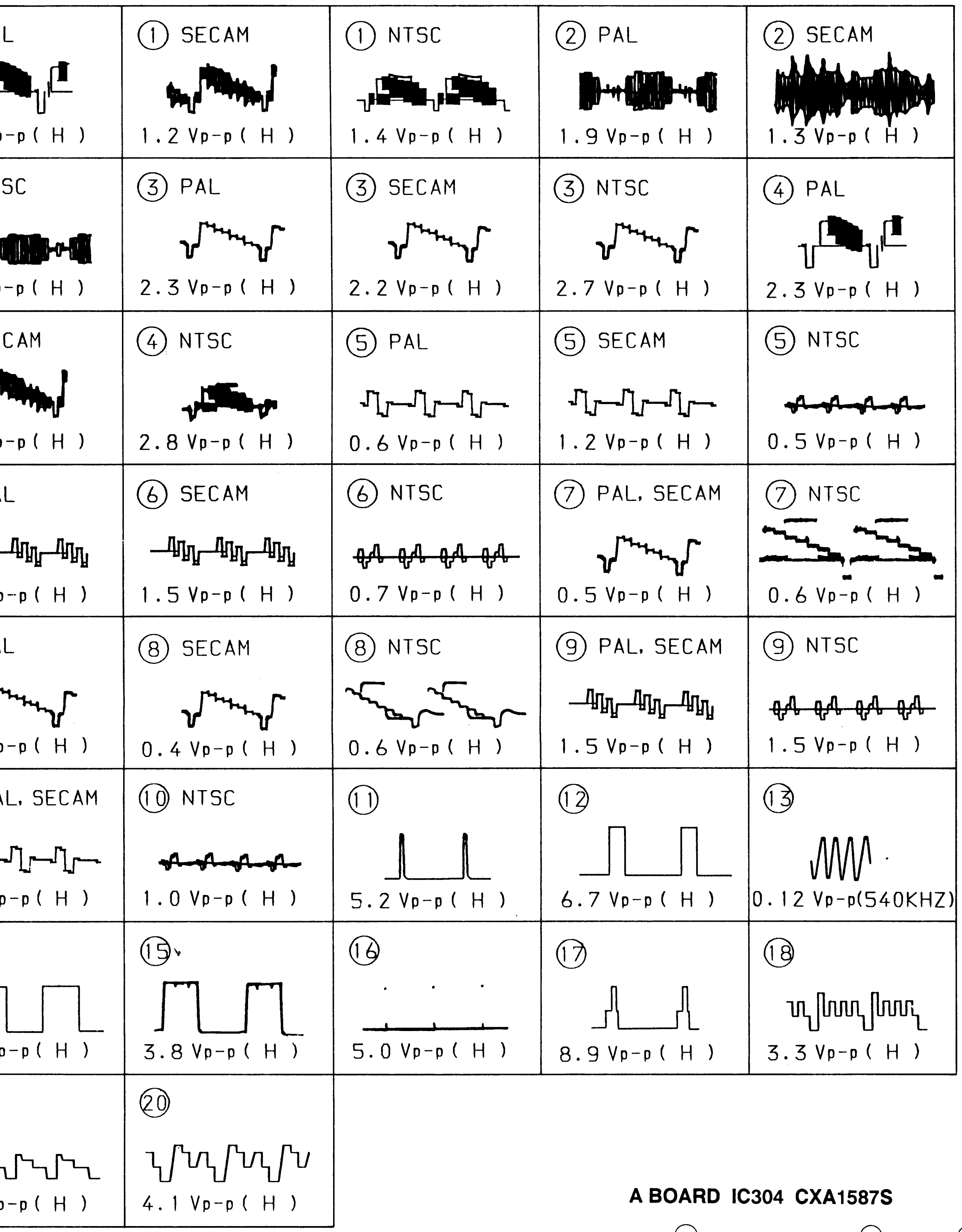
A BO



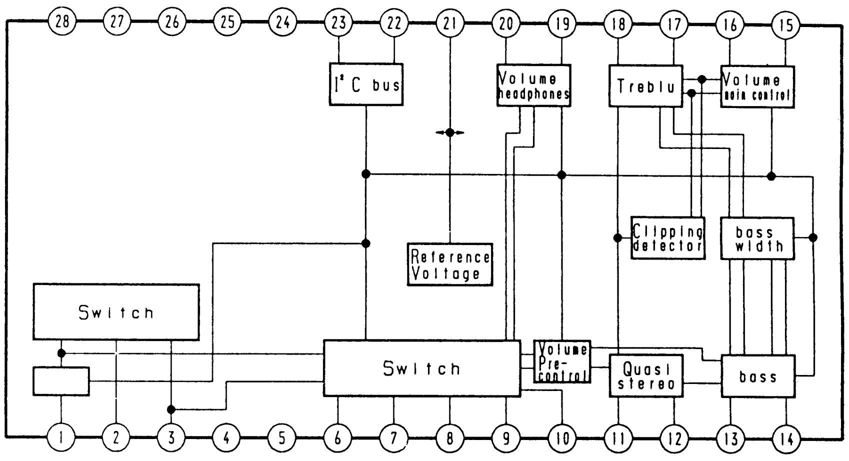
A BO



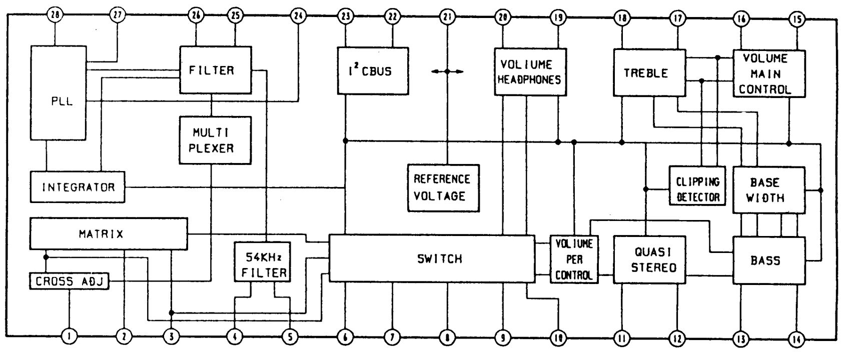
RMS A BOARD


L
-p (H)
① SECAM
1.2 Vp-p (H)
① NTSC
1.4 Vp-p (H)
② PAL
1.9 Vp-p (H)
② SECAM
1.3 Vp-p (H)
SC
-p (H)
③ PAL
2.3 Vp-p (H)
③ SECAM
2.2 Vp-p (H)
③ NTSC
2.7 Vp-p (H)
④ PAL
2.3 Vp-p (H)
CAM
-p (H)
④ NTSC
2.8 Vp-p (H)
⑤ PAL
0.6 Vp-p (H)
⑤ SECAM
1.2 Vp-p (H)
⑤ NTSC
0.5 Vp-p (H)
L
-p (H)
⑥ SECAM
1.5 Vp-p (H)
⑥ NTSC
0.7 Vp-p (H)
⑦ PAL, SECAM
0.5 Vp-p (H)
⑦ NTSC
0.6 Vp-p (H)
L
-p (H)
⑧ SECAM
0.4 Vp-p (H)
⑧ NTSC
0.6 Vp-p (H)
⑨ PAL, SECAM
1.5 Vp-p (H)
⑨ NTSC
1.5 Vp-p (H)
AL, SECAM
-p (H)
⑩ NTSC
1.0 Vp-p (H)
⑪
5.2 Vp-p (H)
⑫
6.7 Vp-p (H)
⑬
0.12 Vp-p(540KHZ)
-p (H)
⑮
3.8 Vp-p (H)
⑯
5.0 Vp-p (H)
⑰
8.9 Vp-p (H)
⑱
3.3 Vp-p (H)
-p (H)
⑳
4.1 Vp-p (H)

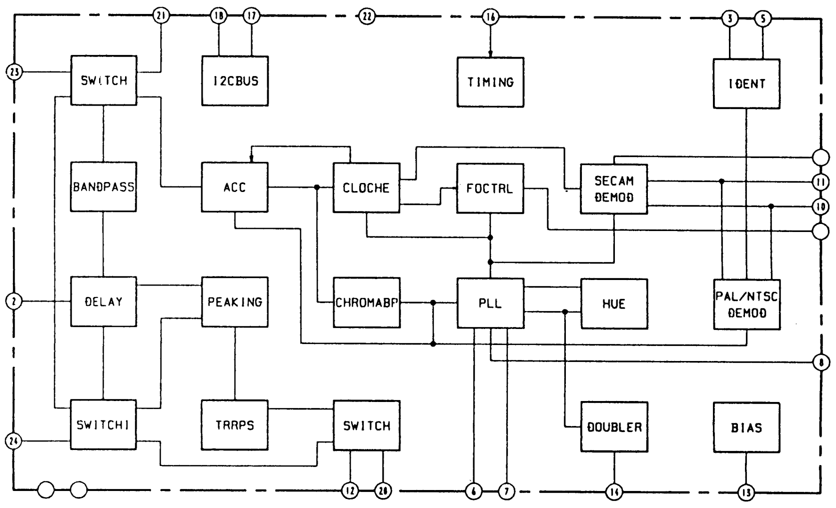
A BOARD IC201 TDA6622 (UK Model only)


I²C bus
Volume headphones
Treblu
Volume main control
Reference Voltage
Clipping detector
bass width
Switch
Switch
Volume Pre-control
Quasi stereo
bass

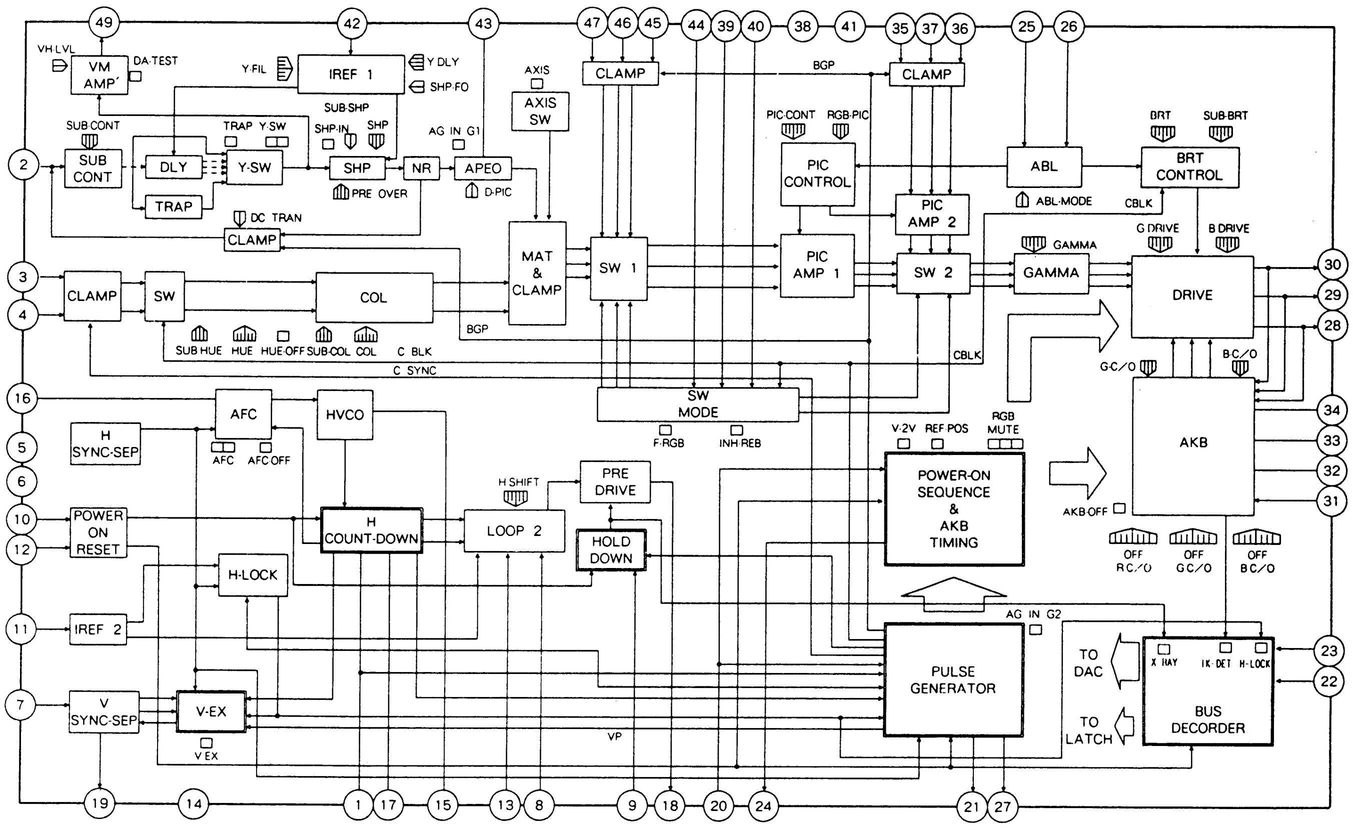
A BOARD IC201 TDA6612


PLL
FILTER
MULTI PLEXER
I²CBUS
VOLUME HEADPHONES
TREBLE
VOLUME MAIN CONTROL
INTEGRATOR
REFERENCE VOLTAGE
CLIPPING DETECTOR
BASE WIDTH
MATRIX
CROSS ADJ
54KHz FILTER
SWITCH
VOLUME PER CONTROL
QUASI STEREO
BASS

A BOARD IC301 TDA9145/N2B


SWITCH
I2CBUS
TIMING
IDENT
BANDPASS
ACC
CLOCHE
FOCTRL
SECAM DEMOD
DELAY
PEAKING
CHROMABP
PLL
HUE
PAL/NTSC DEMOD
SWITCHI
TRAPS
SWITCH
DOUBLER
BIAS

A BOARD IC304 CXA1587S


VH-LVL
VM AMP
DA-TEST
Y-FIL
IREF 1
Y DLY
SHP-FO
AXIS
AXIS SW
CLAMP
BGP
CLAMP
SUB CONT
SUB CONT
DLY
TRAP Y-SW
Y-SW
SUB SHP
SHP-IN SHP
SHP
NR
AG IN G1
APEO
D-PIC
PRE OVER
TRAP
DC TRAN
CLAMP
PIC CONT RGB-PIC
PIC CONTROL
PIC AMP 2
ABL
ABL-MODE
BRT SUB-BRT
BRT CONTROL
CBLK
G DRIVE B DRIVE
GAMMA
CLAMP
SW
COL
MAT & CLAMP
SW 1
PIC AMP 1
SW 2
GAMMA
DRIVE
SUB HUE HUE HUE OFF SUB-COL COL C BLK
C SYNC
BGP
CBLK
G-C/O
B-C/O
SW MODE
F-RGB INH REB
AFC
HVCO
H SYNC-SEP
AFC AFC OFF
V-2V REF POS
RGB MUTE
POWER-ON SEQUENCE & AKB TIMING
AKB
H SHIFT
PRE DRIVE
AKB OFF
POWER ON RESET
H COUNT-DOWN
LOOP 2
HOLD DOWN
OFF R-C/O OFF G-C/O OFF B-C/O
H-LOCK
IREF 2
AG IN G2
PULSE GENERATOR
X RAY IK-DET H-LOCK
TO DAC
BUS DECORDER
TO LATCH
V SYNC-SEP
V-EX
V-EX
VP

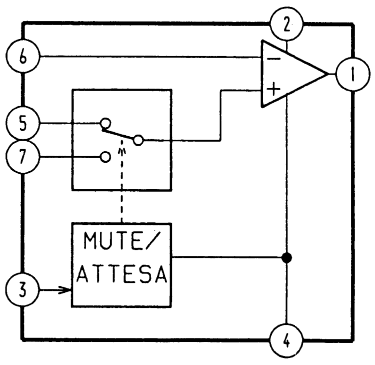
ndicated with the mark ※
ematic diagram are shown
e below.

D

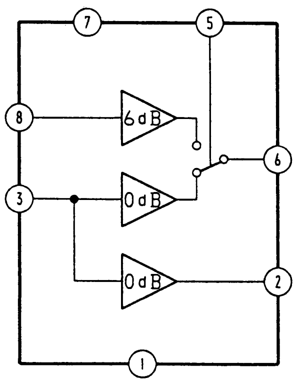
PAL	SECAM	NTSC3.58	NTSC4.43
0.0	0.0	4.8	4.9
0.0	5.0	5.0	0.0
4.7	4.2	3.6	4.1
4.8	4.4	4.6	4.8
0.0	0.0	0.0	1.6
5.5	5.5	5.5	0.1
0.0	5.5	5.5	0.0
0.0	0.0	0.0	1.6

A2941B	A2941D	A2943E	A2941K	A2942U
1MF	1MF	1MF	1MF	0.01MF
1MF	2.2MF	2.2MF	2.2MF	2.2MF
470PF	-	-	-	-
DAN204K	-	-	-	-
DAN204K	-	-	-	-
TDA6612	TDA6612	TDA6612	TDA6612	TDA6622
IFH-389F	IFH-389	IFH-389	IFH-389	IFH-395
12K	-	-	-	-
330	-	-	-	-
120	-	-	-	-
0	-	-	-	-
UV916H	UV916H	UV916H	UV916H	U944C

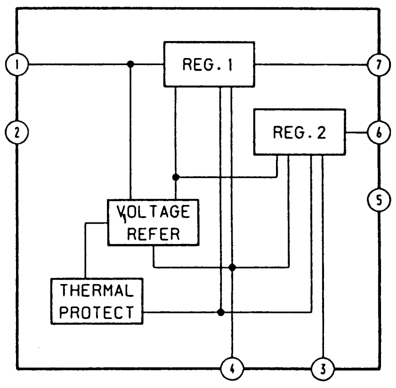
A BOARD IC251/261 TDA2052


MUTE/ ATTESA

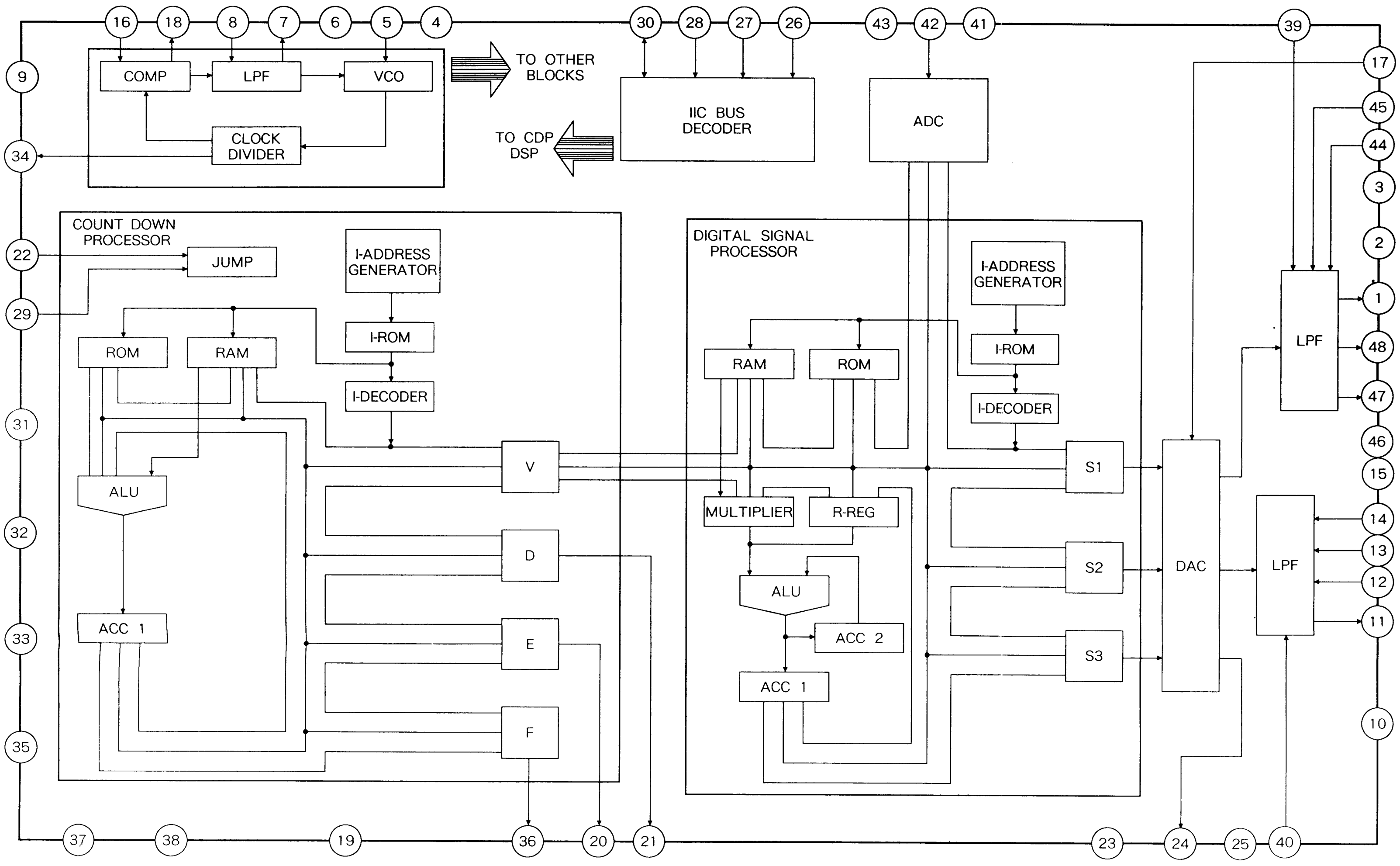
A BOARD IC402 TEA2114

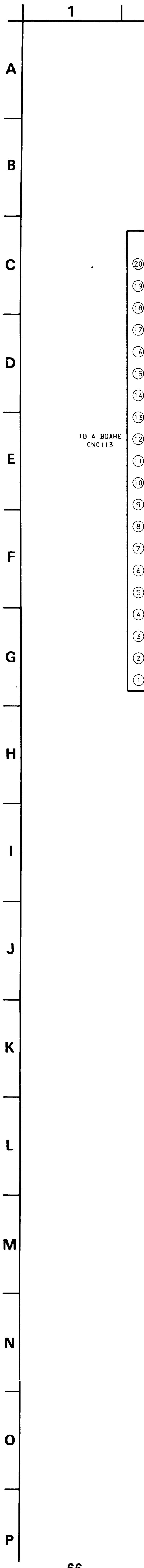


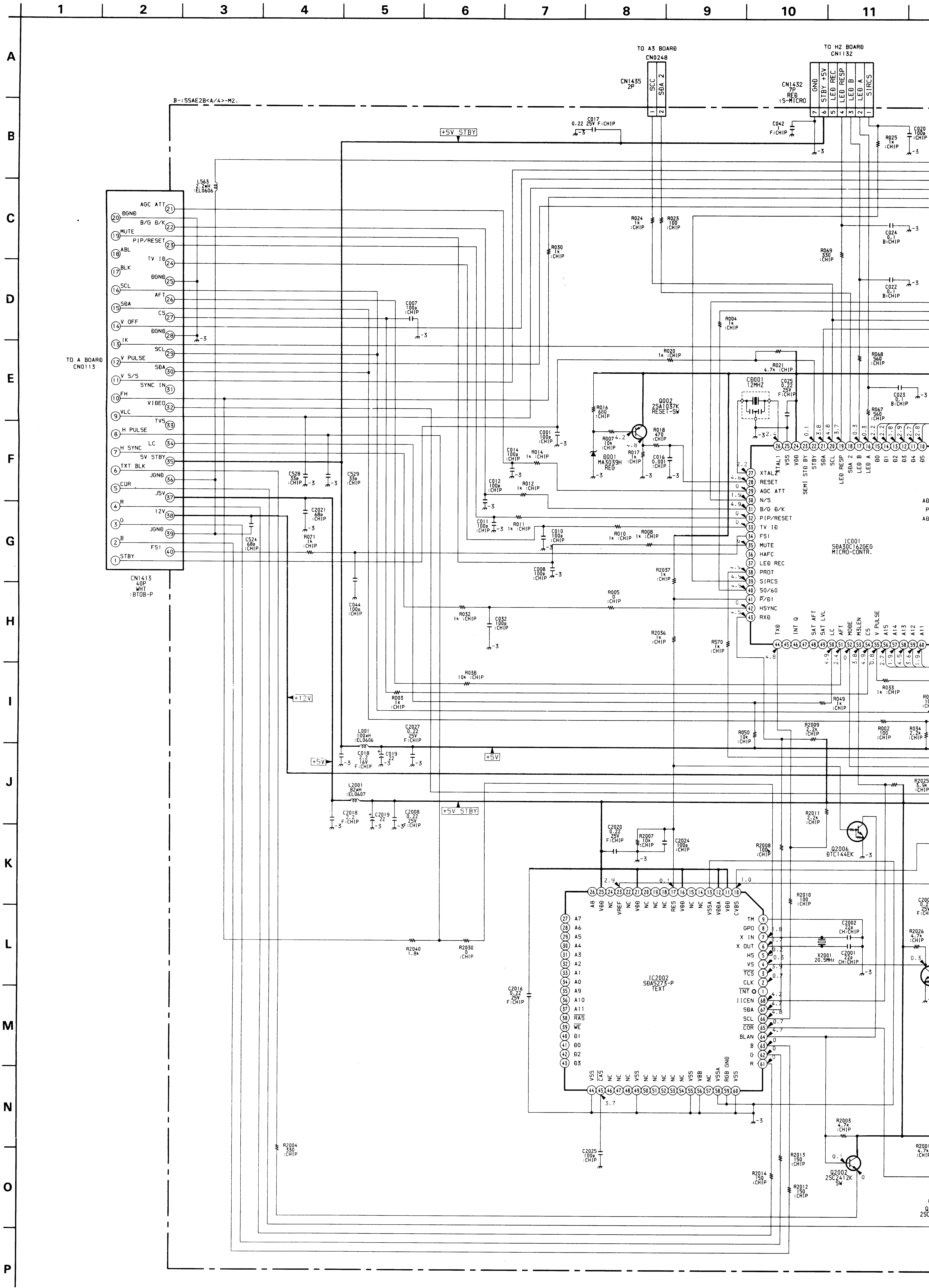
A BOARD IC681 TDA8138A

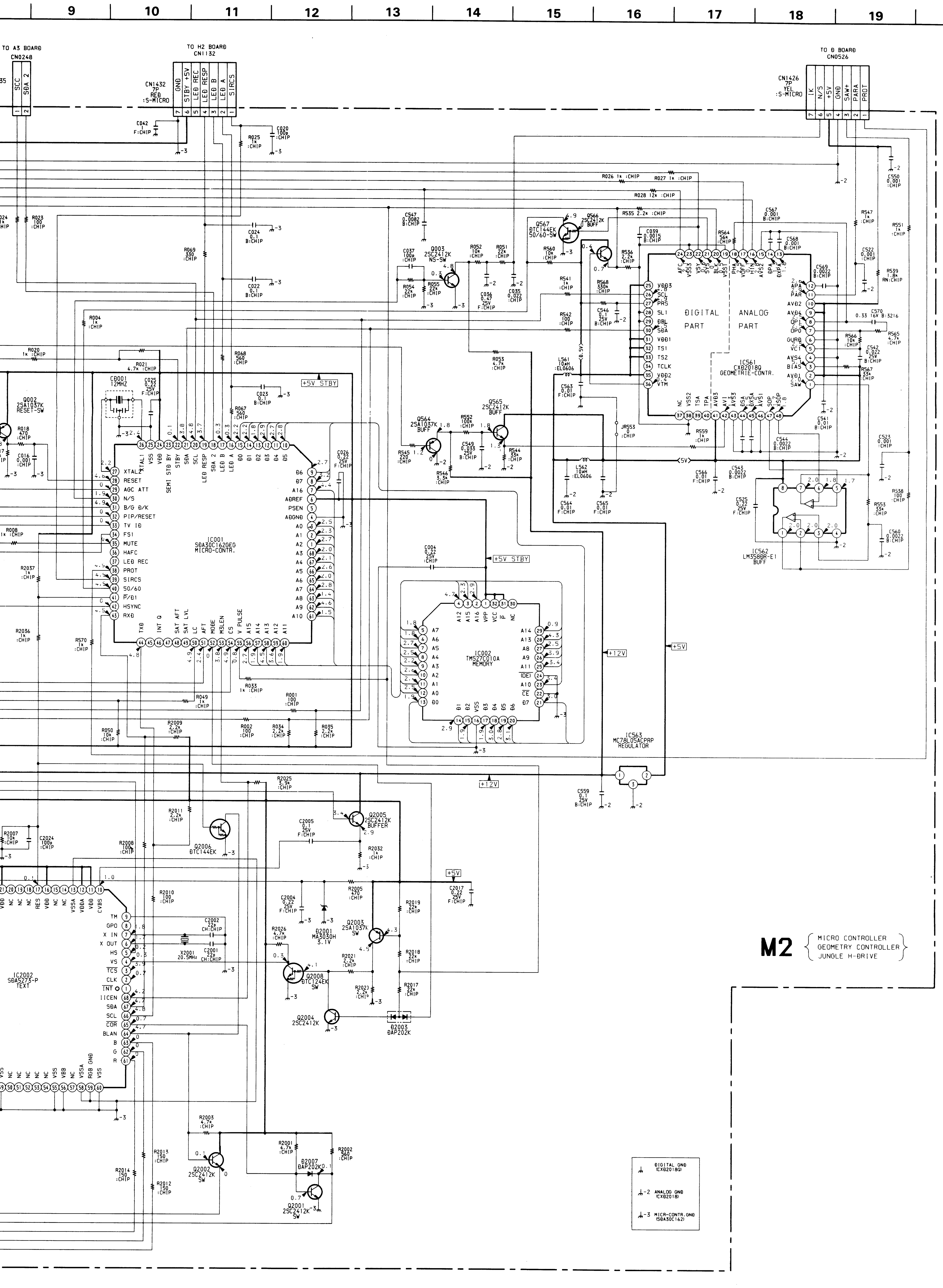

REG. 1
REG. 2
VOLTAGE REFER
THERMAL PROTECT

M2 BOARD IC561 CXD2018Q


16
18
8
7
6
5
4
30
28
27
26
43
42
41
39
9
34
22
29
31
32
33
35
17
45
44
3
2
1
48
47
46
15
14
13
12
11
10
37
38
19
36
20
21
23
24
25
40
COMP
LPF
VCO
CLOCK DIVIDER
TO OTHER BLOCKS
TO CDP DSP
IIC BUS DECODER
ADC
COUNT DOWN PROCESSOR
JUMP
I-ADDRESS GENERATOR
I-ROM
I-DECODER
ROM
RAM
ALU
ACC 1
V
D
E
F
DIGITAL SIGNAL PROCESSOR
I-ADDRESS GENERATOR
I-ROM
I-DECODER
RAM
ROM
MULTIPLIER
R-REG
ALU
ACC 2
ACC 1
S1
S2
S3
DAC
LPF
LPF

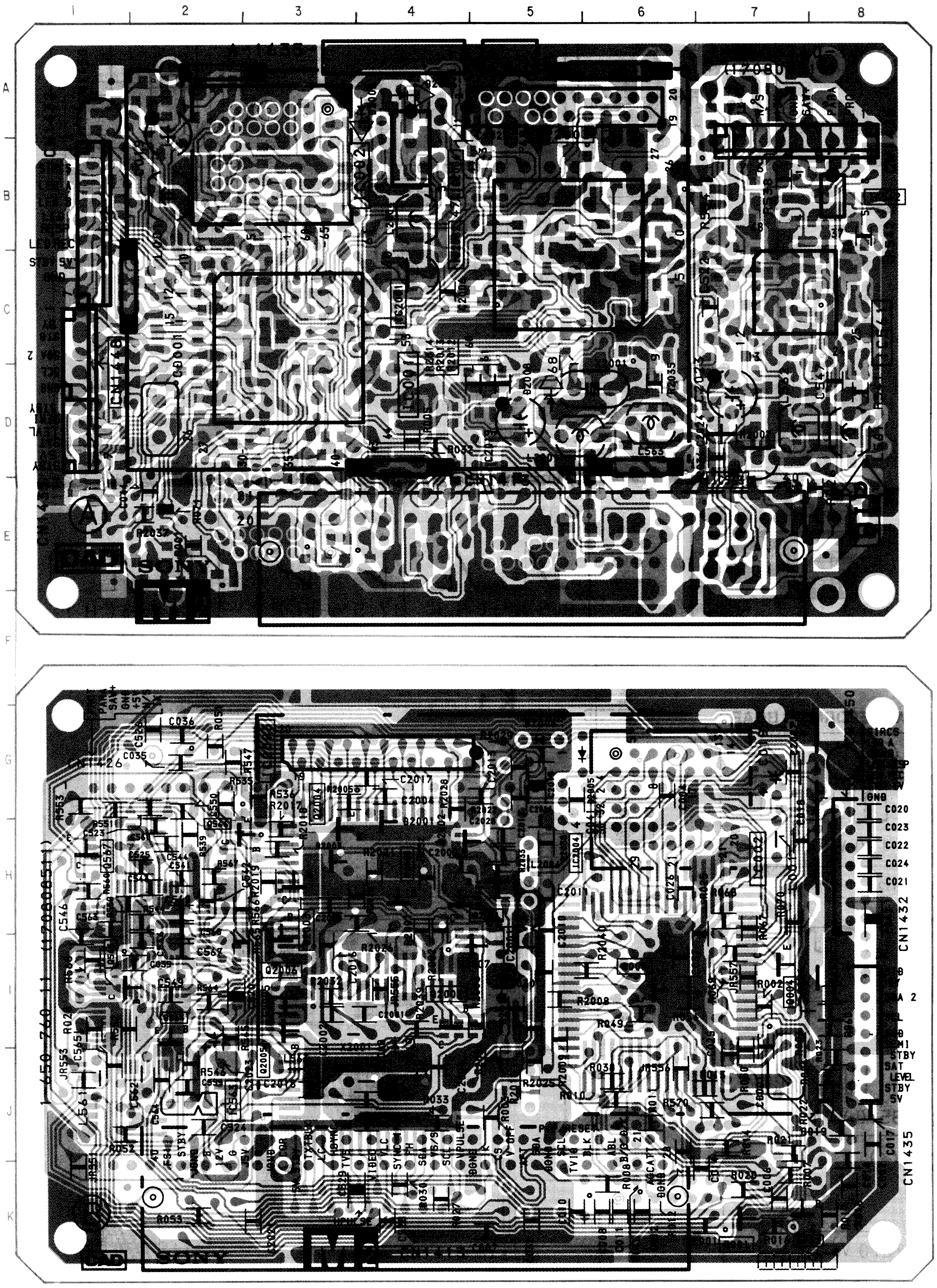

1
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
TO A BOARD CN0113
⑳
⑲
⑱
⑰
⑯
⑮
⑭
⑬
⑫
⑪
⑩
⑨
⑧
⑦
⑥
⑤
④
③
②
①


TO A3 BOARD
CN0248
CN1435
2P
SCC
SDA 2
TO H2 BOARD
CN1132
CN1432
7P
RED
:S-MICRO
GND
STBY +5V
LED REC
LED RESP
LED B
LED A
SIRCS
B-:SSAE2B<A/4>-M2.
+5V STBY
L563
2.2μH
:EL0606
TO A BOARD
CN0113
AGC ATT
DGND
B/G D/K
MUTE
PIP/RESET
ABL
TV ID
BLK
SCL
SDA
AFT
CS
V OFF
IK
V PULSE
V S/S
SYNC IN
FH
VIDEO
VLC
TVS
H PULSE
LC
H SYNC
5V STBY
TXT BLK
JGND
COR
J5V
R
12V
G
B
FS1
STBY
CN1413
40P
WHT
:BTOB-P
CB001
12MHZ
Q002
2SA1037K
RESET-SW
D001
MA3039H
REG
IC001
SDA30C162GEG
MICRO-CONTR.
XTAL2
RESET
AGC ATT
N/S
B/G D/K
PIP/RESET
TV ID
FS1
MUTE
HAFC
LED REC
PROT
SIRCS
50/60
F/D1
HSYNC
RXD
XTAL1
VSS
VDD
SEMI STD BY
STBY
SDA
SCL
LED RESP
SDA 2
LED B
LED A
D0
D1
D2
D3
D4
D5
TXD
INT Q
SAT AFT
SAT LVL
LC
AFT
MODE
M3LEN
CS
V PULSE
A15
A14
A13
A12
A11
+12V
+5V
L001
100μH
:EL0606
L2001
82μH
:EL0607
Q2006
DTC144EK
IC2002
SDA5273-P
TEXT
X2001
20.5MHz
Q2002
2SC2412K
SW
A8
VDD
NC
VREF
RES
VSSA
VDDA
CVBS
TM
GPO
X IN
X OUT
HS
VS
TCS
CLK
INT
IICEN
COR
BLAN
A7
A6
A5
A4
A3
A2
A1
A0
A9
A10
A11
RAS
WE
D1
D0
D2
D3
VSS
CAS
VBB
RGB GND


9
10
11
12
13
14
15
16
17
18
19
TO A3 BOARD CN0248
SCL
SDA 2
TO H2 BOARD CN1132
CN1432 7P RED :S-MICRO
GND
STBY +5V
LED REC
LED RESP
LED B
LED A
SIRCS
TO D BOARD CN0526
CN1426 7P YEL :S-MICRO
IK
N/S
+5V
GND
SAW+
PARA
PROT
Q002 2SA1037K RESET-SW
IC001 SDA30C162GEG MICRO-CONTR.
CD001 12MHZ
+5V STBY
XTAL2
RESET
AGC ATT
N/S
B/G D/K
PIP/RESET
TV ID
FS1
MUTE
HAFC
LED REC
PROT
SIRCS
50/60
P/D1
HSYNC
RXD
TXD
INT Q
SAT AFT
SAT LVL
LC
AFT
MODE
M3LEN
CS
V PULSE
XTAL1
VSS
VDD
SEMI STD BY
STBY
SDA
SCL
LED RESP
SDA 2
LED B
LED A
D6
D7
A16
ADREF
PSEN
ADGND
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
IC002 TMS27C010A MEMORY
A12
A15
A16
VPP
VCC
P
NC
A14
A13
A8
A9
A11
OE
A10
CE
D7
D0
D1
D2
VSS
D3
D4
D5
D6
Q003 2SC2412K NS-SW
Q567 DTC144EK 50/60-SW
Q566 2SC2412K BUFF
Q564 2SA1037K BUFF
Q565 2SC2412K BUFF
IC561 CXD2018Q GEOMETRIE-CONTR.
DIGITAL PART
ANALOG PART
VDD3
SCL
PRS
SL1
DBL
SDA
VDD1
TS1
TS2
TCLK
VDD2
VTM
APA
PAR
AVD2
AVD4
QPL
QPO
GURD
VCI
AVS4
BIAS
AXO
SAW
IC562 LM358DR-E1 BUFF
IC563 MC78L05ACPRP REGULATOR
+12V
+5V
<5V>
Q2005 2SC2412K BUFFER
Q2006 DTC144EK
Q2003 2SA1037K SW
D2001 MA3030H 3.1V
Q2008 DTC124EK SW
Q2004 2SC2412K
D2003 DAP202K
IC2002 SDA5273-P TEXT
X2001 20.5MHz
TM
GPO
X IN
X OUT
HS
VS
TCS
CLK
INT
IICEN
SDA
SCL
COR
BLAN
B
G
R
CVBS
Q2002 2SC2412K SW
D2007 DAP202K
Q2001 2SC2412K SW
DIGITAL GND (CXD2018Q)
-2 ANALOG GND (CXD2018)
-3 MICR-CONTR. GND (SDA30C162)

M2 MICRO CONTROLLER
GEOMETRY CONTROLLER
JUNGLE H-DRIVE

– M2 BOARD –


1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
H
I
J
K
IC001
IC2004
CN1432
CN1435
SONY
M2

IC	
IC001	C - 4
IC002	B - 3, H - 7
IC561	C - 8
IC562	B - 8
IC563	D - 7, J - 3
IC2001	C - 4, I - 5
IC2002	C- 5
IC2003	B - 5, G - 3
IC2004	B - 4, H - 5

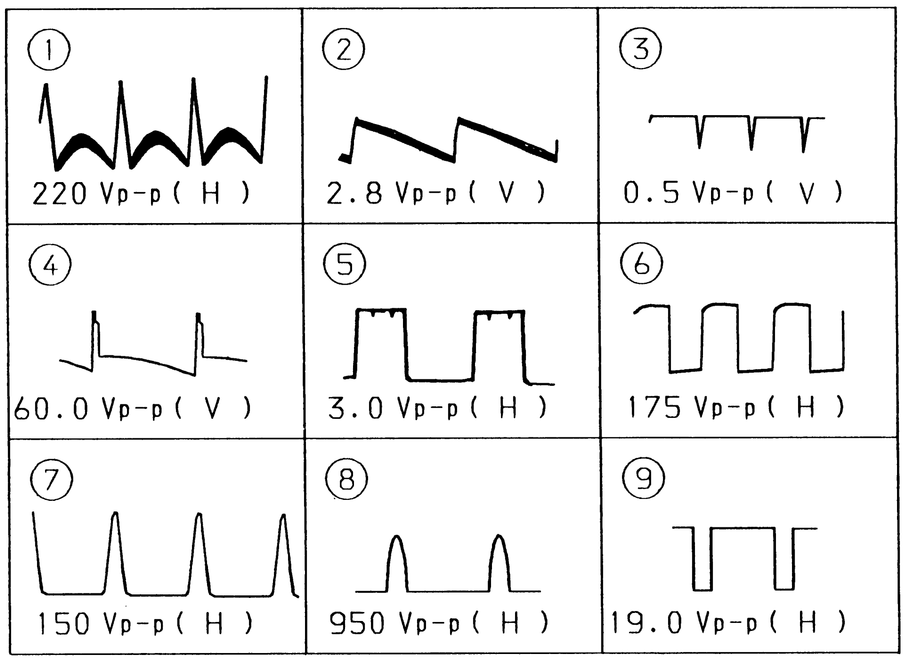
TRANSISTOR	
Q002	K - 7
Q003	I - 6
Q564	I - 2
Q565	I - 1
Q566	G - 2
Q567	H - 1
Q2001	H - 5
Q2002	I - 4
Q2003	H - 3
Q2005	J - 3
Q2006	I - 3
Q2008	H - 4

DIODE	
D001	K - 7
D2001	G - 4
D2002	H - 4
D2003	H - 3

Note :

- ▨ : Pattern from the side which enables seeing.
- ▩ : Pattern of the rear side.

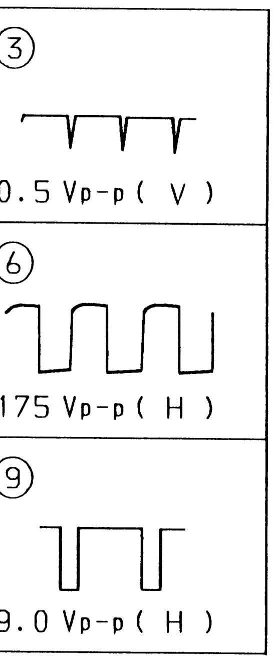
WAVEFORMS D BOARD

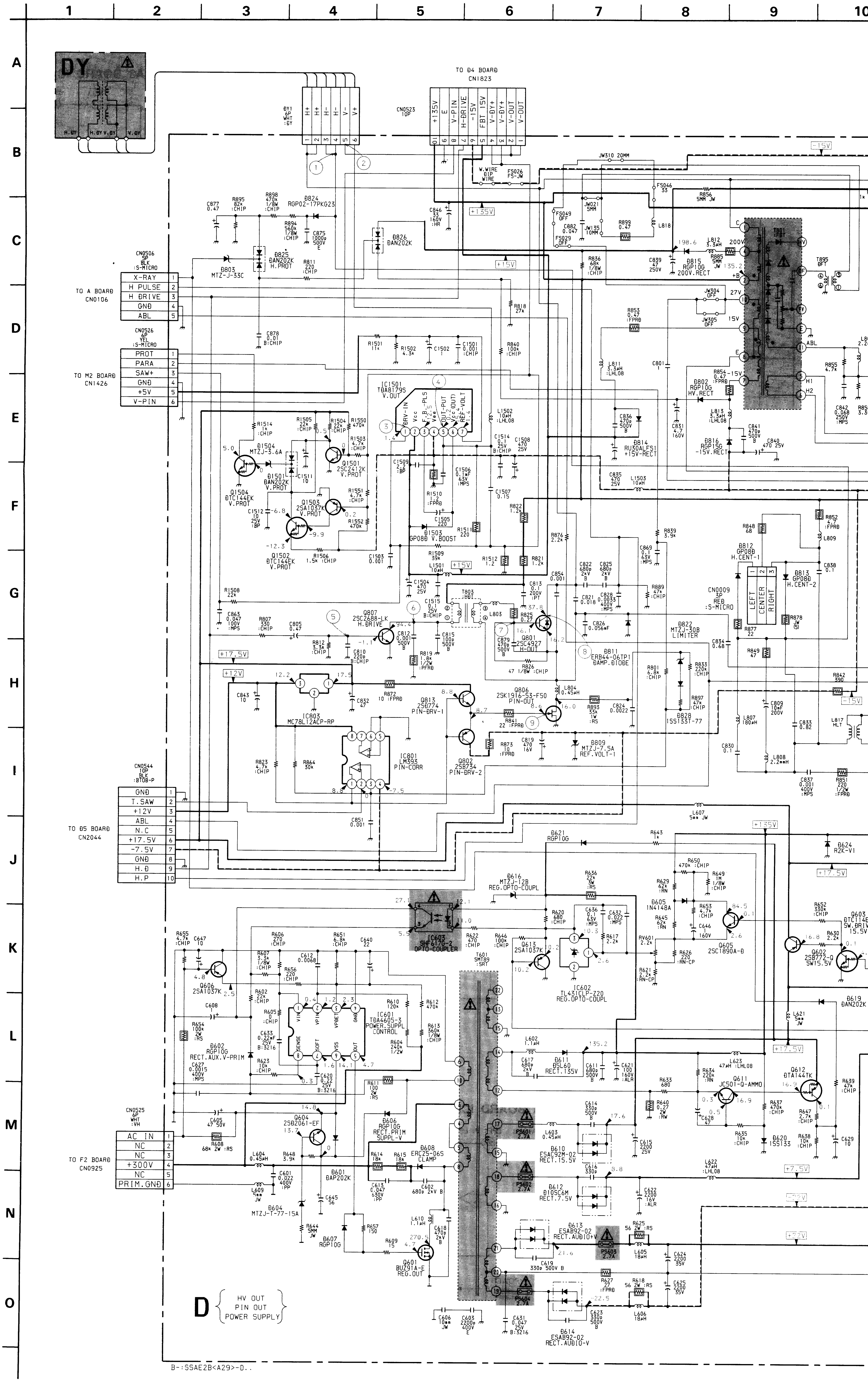


IC	
C001	C - 4
C002	B - 3, H - 7
C561	C - 8
C562	B - 8
C563	D - 7, J - 3
C2001	C - 4, I - 5
C2002	C - 5
C2003	B - 5, G - 3
C2004	B - 4, H - 5

TRANSISTOR	
Q002	K - 7
Q003	I - 6
Q564	I - 2
Q565	I - 1
Q566	G - 2
Q567	H - 1
Q2001	H - 5
Q2002	I - 4
Q2003	H - 3
Q2005	J - 3
Q2006	I - 3
Q2008	H - 4

DIODE	
D001	K - 7
D2001	G - 4
D2002	H - 4
D2003	H - 3





1
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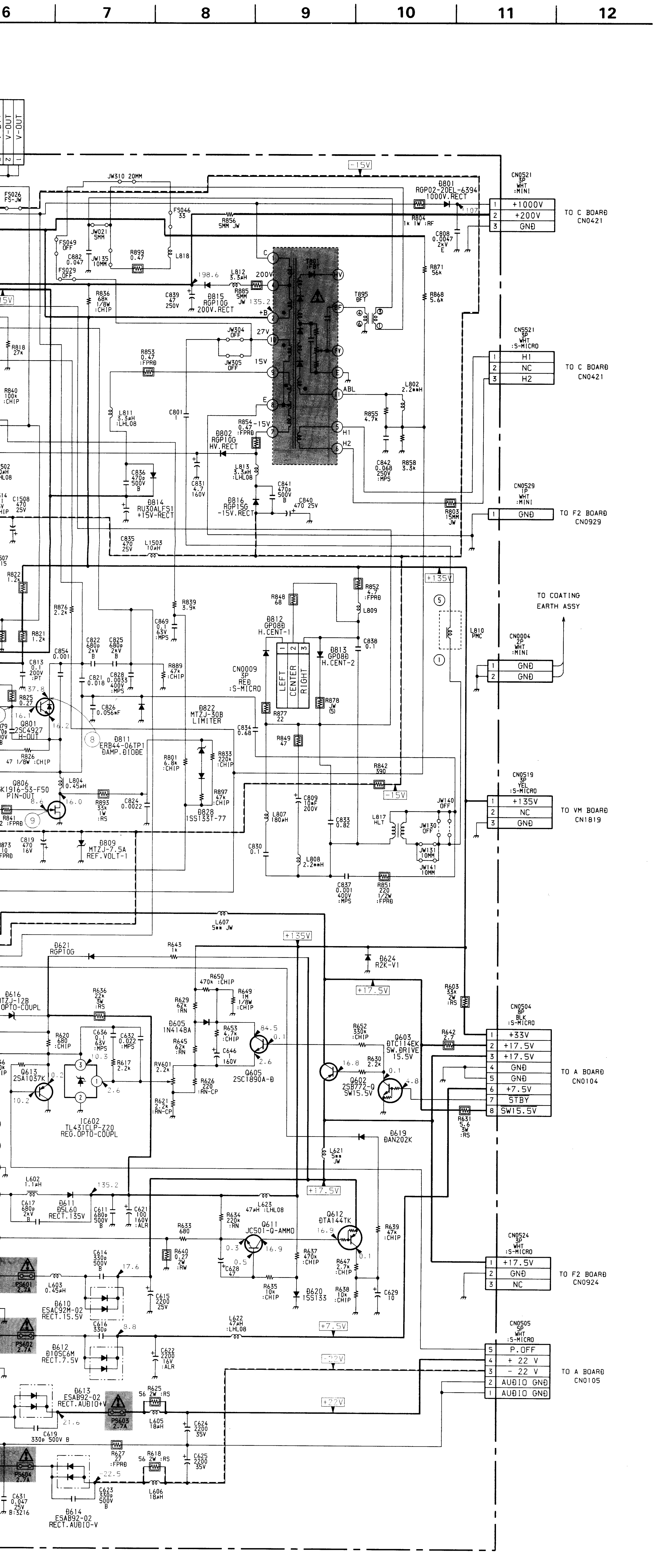
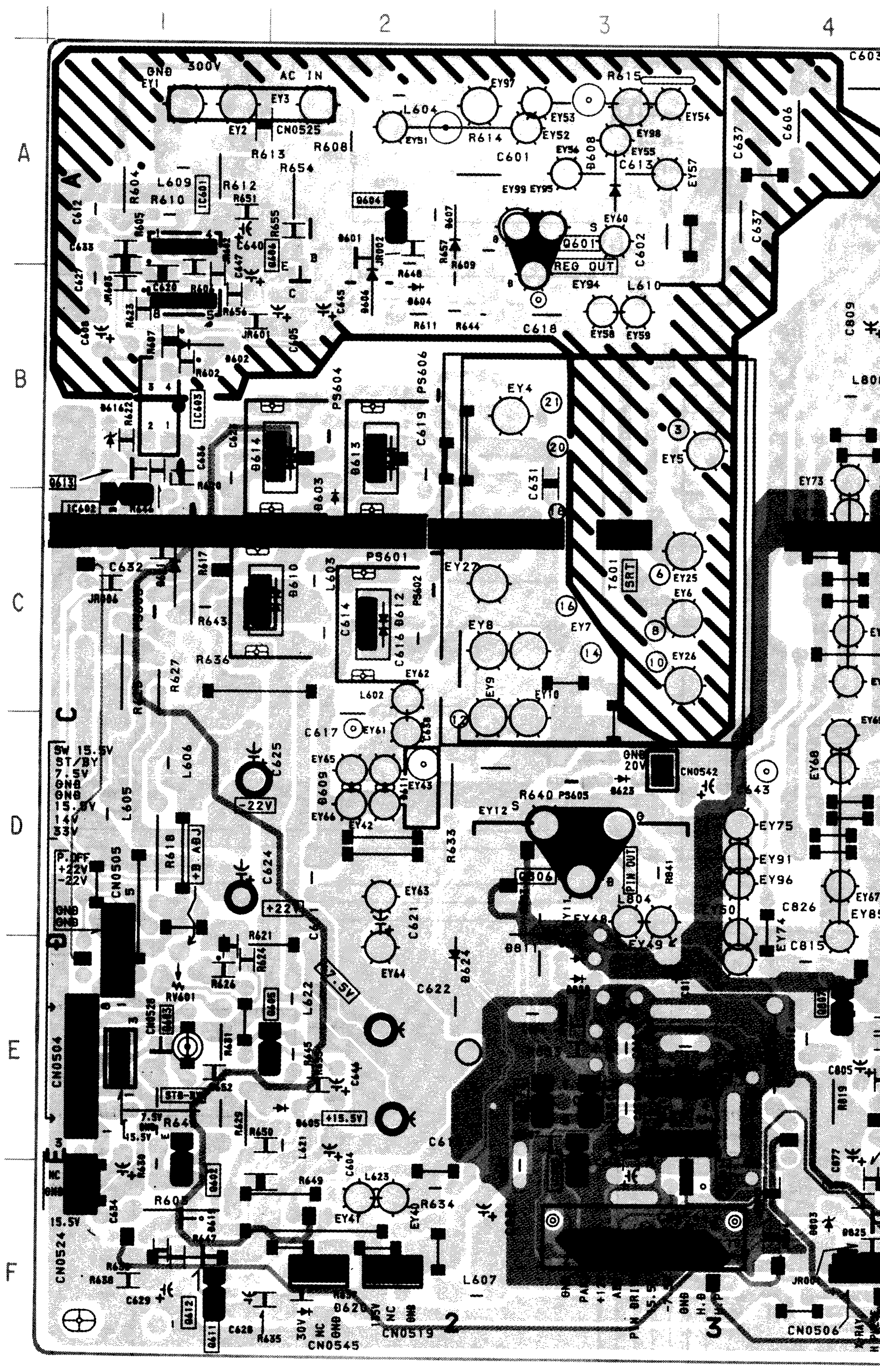
7
8
9
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
DY
H.DY
H.DY
V.DY
V.DY
TO D4 BOARD CN1823
CN0523 10P
+135V
E
V-DRIVE
H-DRIVE
-15V
FBT 15V
V-DY+
V-DY-
V-OUT
V-OUT
DY1 6P WHT :DY
H+
H+
H-
H-
V-
V+
JW310 20MM
-15V
+135V
+15V
TO A BOARD CN0106
CN0506 5P BLK :S-MICRO
X-RAY
H PULSE
H DRIVE
GND
ABL
TO M2 BOARD CN1426
CN0526 6P YEL :S-MICRO
PROT
PARA
SAW+
GND
+5V
V-PIN
IC1501 TDA8179S V.OUT
Q1501 2SC2412K V.PROT
Q1503 2SA1037K V.PROT
Q1502 DTC144EK V.PROT
Q1504 DTC144EK V.PROT
D1504 MTZJ-3.6A
D1501 DAN202K V.PROT
D1503 GP08D V.BOOST
D824 RGP02-17PKG23
D825 DAN202K H.PROT
D826 DAN202K
D803 MTZ-J-33C
D815 RGP10G 200V.RECT
D814 RU3OALFS1 +15V-RECT
D816 RGP15G -15V.RECT
D802 RGP10G HV.RECT
D812 GP08D H.CENT-1
D813 GP08D H.CENT-2
CN0009 3P RED :S-MICRO
LEFT
CENTER
RIGHT
D822 MTZJ-30B LIMITER
D811 ERB44-06TP1 DAMP.DIODE
D828 1SS133T-77
D809 MTZJ-7.5A REF.VOLT-1
Q807 2SC2688-LK H.DRIVE
Q801 2SC4927 H-OUT
Q806 2SK1916-53-F50 PIN-OUT
Q813 2SD774 PIN-DRV-1
Q802 2SB734 PIN-DRV-2
IC803 MC78L12ACP-RP
IC801 LM393 PIN-CORR
T803 HDT
T801 FBT
T895 BFT
ABL
+17.5V
+12V
TO D5 BOARD CN2044
CN0544 10P BLK :BTOB-P
GND
T.SAW
+12V
ABL
N.C
+17.5V
-7.5V
GND
H.D
H.P
D621 RGP10G
D624 R2K-V1
D616 MTZJ-12B REG.OPTO-COUPL
IC603 SHF6170-2 OPTO-COUPLER
Q613 2SA1037K
IC602 TL431CLP-Z20 REG.OPTO-COUPL
D605 1N4148A
Q605 2SC1890A-D
Q603 DTC114E SW.DRIV 15.5V
Q602 2SB772-Q SW15.5V
D619 DAN202K
Q606 2SA1037K
IC601 TDA4605-3 POWER.SUPPL CONTROL
D602 RGP10G RECT.AUX.V-PRIM
T601 SMT89 :SRT
D611 D5L60 RECT.135V
Q611 JC501-Q-AMMO
Q612 DTA144TK
D620 1SS133
TO F2 BOARD CN0925
CN0525 6P WHT :VH
AC IN
NC
NC
+300V
NC
PRIM.GND
Q604 2SD2061-EF
D606 RGP10G RECT.PRIM SUPPL-V
D608 ERC25-06S CLAMP
D601 DAP202K
D604 MTZJ-T-77-15A
D607 RGP10G
Q601 BUZ91A-E REG.OUT
PS601 2.7A
PS602 2.7A
PS603 2.7A
PS604 2.7A
D610 ESAC92M-02 RECT.15.5V
D612 D10SC6M RECT.7.5V
D613 ESAB92-02 RECT.AUDIO+V
D614 ESAB92-02 RECT.AUDIO-V
+17.5V
+7.5V
D { HV OUT PIN OUT POWER SUPPLY }
B-:SSAE2B<A29>-D..



6
7
8
9
10
11
12
TO C BOARD CN0421
+1000V
+200V
GND
TO C BOARD CN0421
H1
NC
H2
TO F2 BOARD CN0929
TO COATING EARTH ASSY
TO VM BOARD CN1819
+135V
TO A BOARD CN0104
+33V
+17.5V
STBY
SW15.5V
TO F2 BOARD CN0924
TO A BOARD CN0105
P.OFF
+ 22 V
- 22 V
AUDIO GND
IC602 TL431CLP-Z20 REG.OPTO-COUPL

- D BOARD -



1
2
3
4
A
B
C
D
E
F

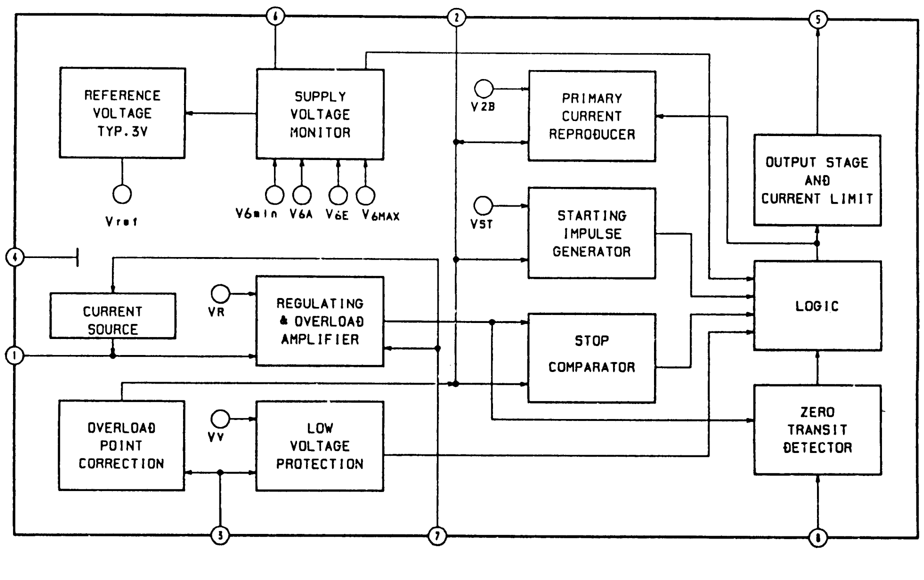
NOTE:

The circuit indicated as left contains high voltage of o

600 Vp-p. Care must be paid to prevent an electric shock

inspection or repairing.

D BOARD IC601 TDA4605-3

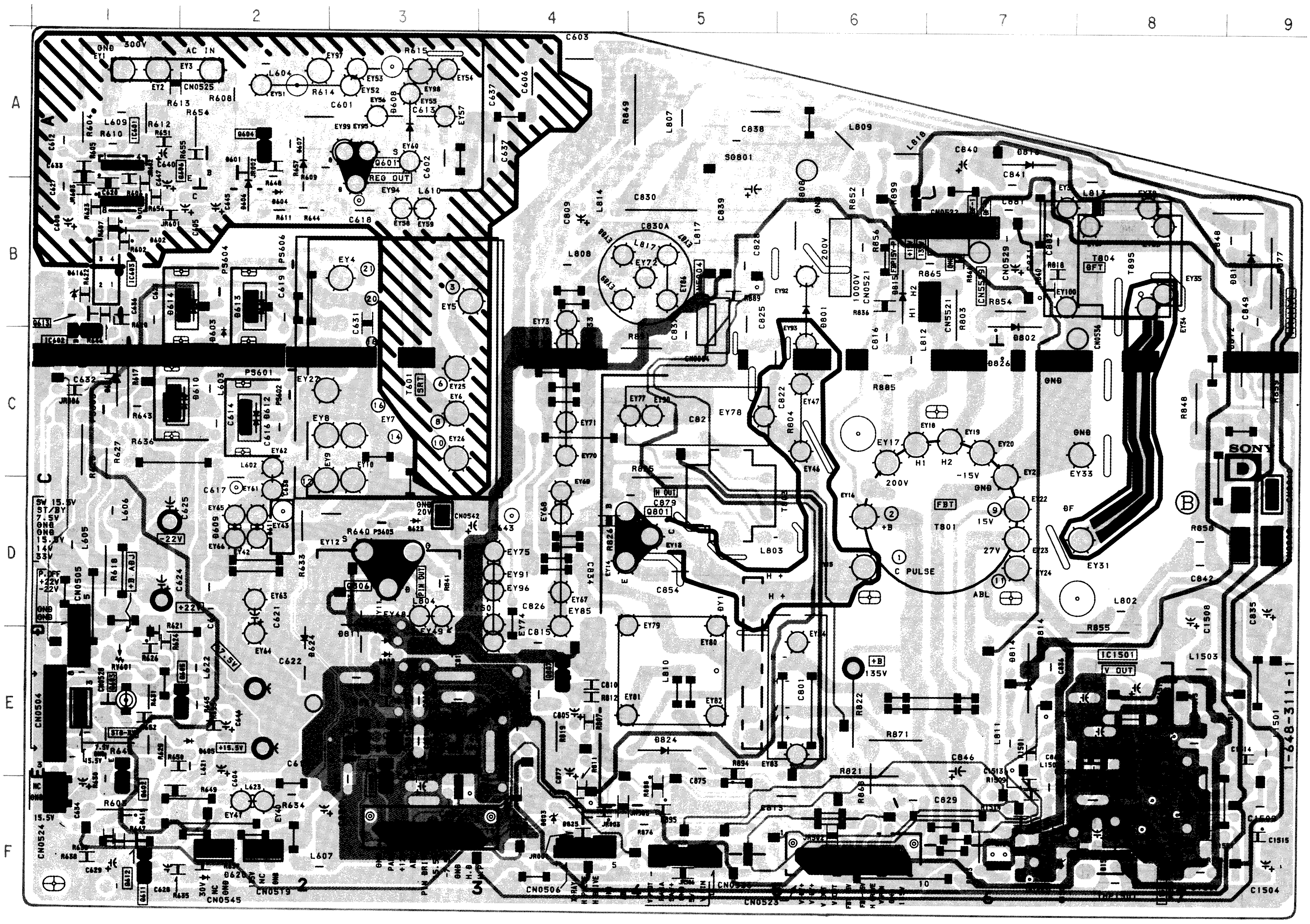


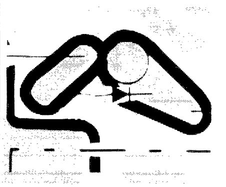
REFERENCE VOLTAGE TYP.3V
Vref
SUPPLY VOLTAGE MONITOR
V6min V6A V6E V6MAX
PRIMARY CURRENT REPRODUCER
V2B
STARTING IMPULSE GENERATOR
VST
OUTPUT STAGE AND CURRENT LIMIT
LOGIC
CURRENT SOURCE
VR
REGULATING & OVERLOAD AMPLIFIER
STOP COMPARATOR
OVERLOAD POINT CORRECTION
VY
LOW VOLTAGE PROTECTION
ZERO TRANSIT DETECTOR

Note :

- ░ : Pattern from the side which enables seeing.
- ▓ : Pattern of the rear side.

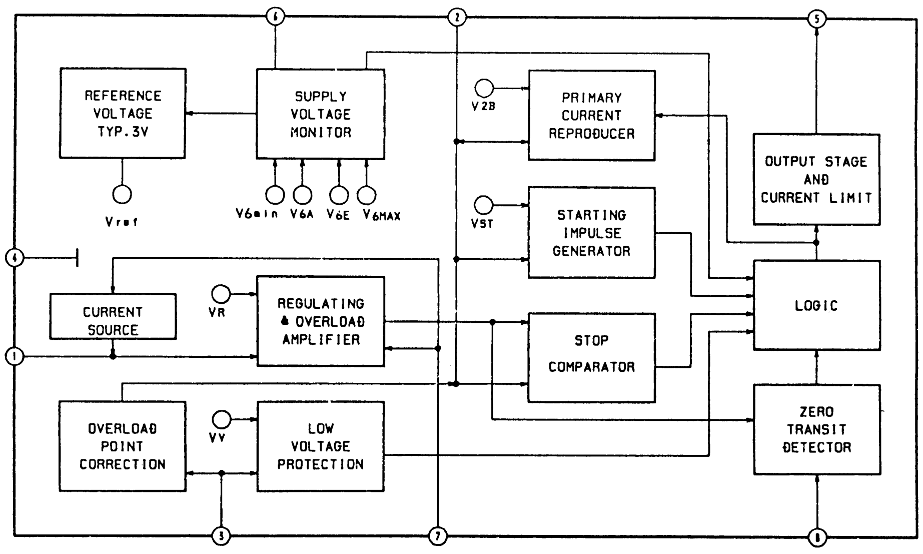
– D BOARD –


1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
AC IN
CN0525
REG OUT
SRT
SONY
D
H OUT
FBT
T801
IC1501
V OUT
+B
135V
C PULSE
ABL
200V
-15V
15V
27V
1-648-311-11



NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

D BOARD IC601 TDA4605-3

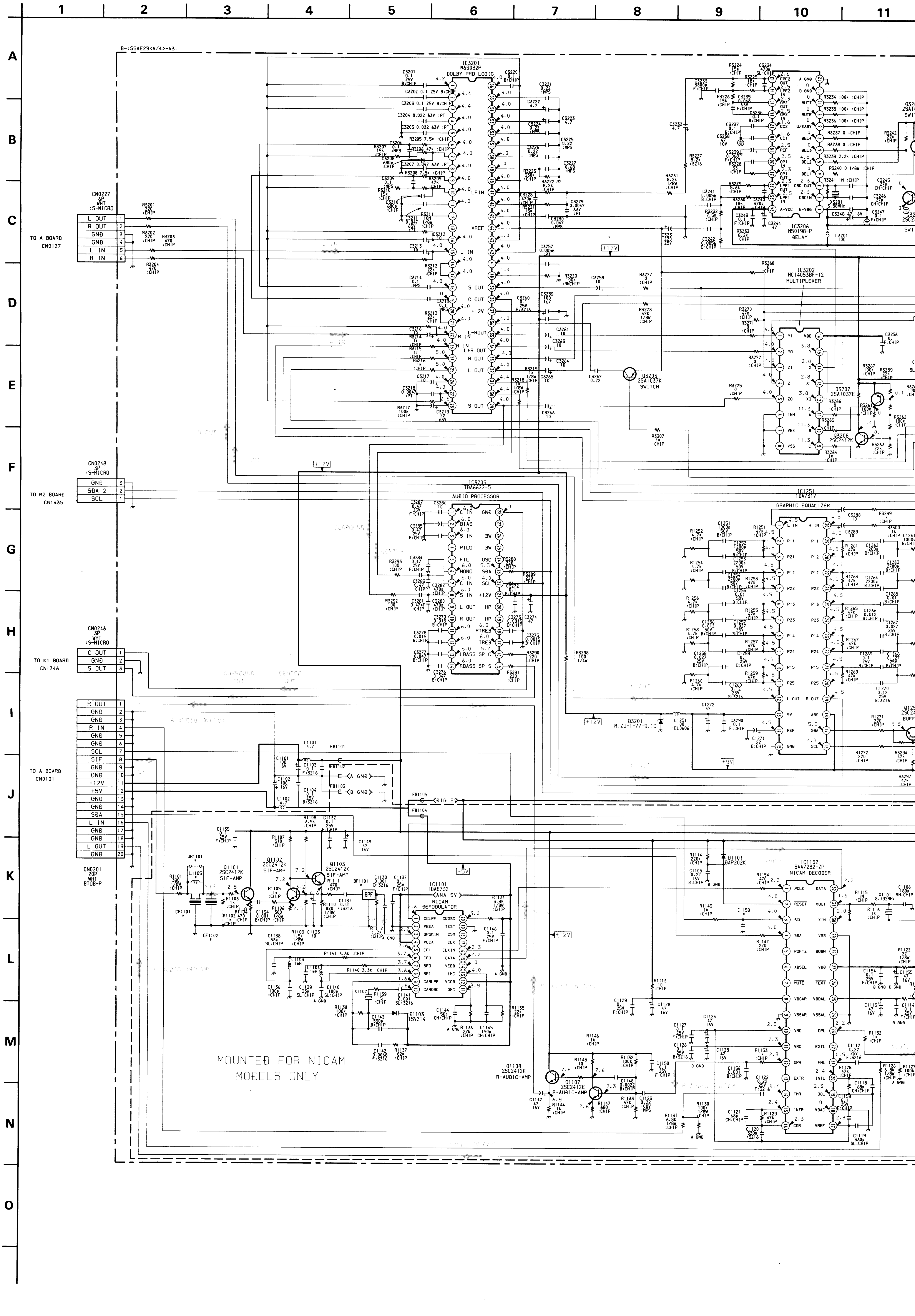

④
②
⑤
REFERENCE VOLTAGE TYP.3V
SUPPLY VOLTAGE MONITOR
Vref
V6min V6A V6E V6MAX
V2B
PRIMARY CURRENT REPRODUCER
OUTPUT STAGE AND CURRENT LIMIT
VST
STARTING IMPULSE GENERATOR
⑥
LOGIC
CURRENT SOURCE
VR
REGULATING & OVERLOAD AMPLIFIER
①
STOP COMPARATOR
OVERLOAD POINT CORRECTION
VV
LOW VOLTAGE PROTECTION
ZERO TRANSIT DETECTOR
③
⑦
⑧

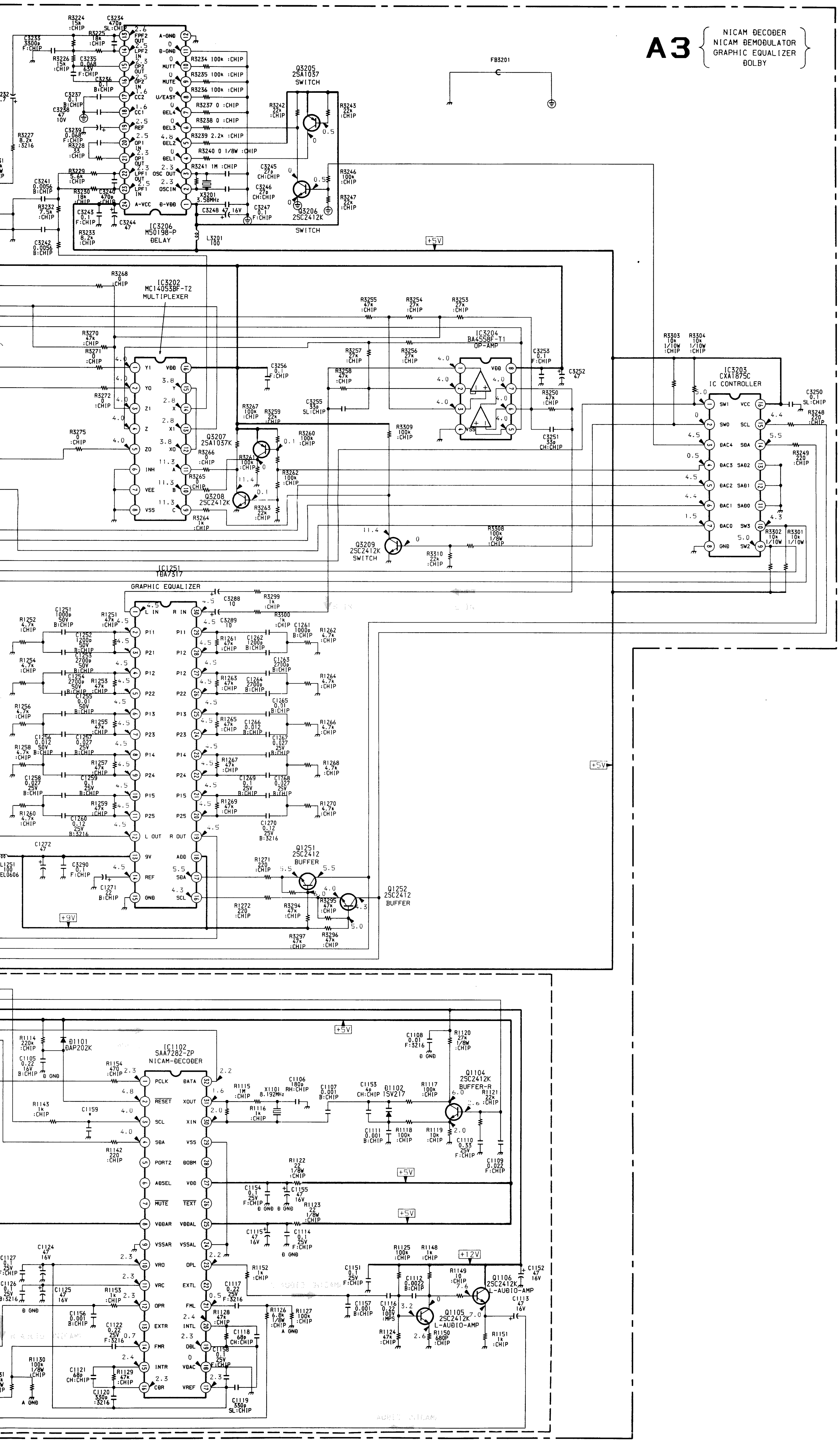
IC	
IC601	A – 1
IC602	C – 1
IC603	B – 1
IC801	E – 3
IC803	F – 3
IC1501	E – 8

TRANSISTOR	
Q601	A – 3
Q602	F – 1
Q603	E – 1
Q604	A – 2
Q605	E – 2
Q606	B – 2
Q611	F – 1
Q612	F – 1
Q613	B – 1
Q801	D – 5
Q802	E – 3
Q806	D – 3
Q807	E – 4
Q813	E – 3
Q1501	F – 8
Q1502	F – 8
Q1503	F – 8
Q1504	F – 7

DIODE	
D601	A – 2
D602	B – 1
D604	B – 2
D605	E – 2
D606	B – 2
D607	A – 2
D608	A – 3
D610	C – 2
D611	D – 2
D612	C – 2
D613	B – 2
D614	B – 2
D616	B – 1
D619	F – 1
D620	F – 2
D621	C – 1
D624	E – 2
D801	B – 6
D802	B – 7
D803	F – 4
D809	E – 3
D811	D – 3
D812	C – 9
D813	B – 9
D814	E – 7
D815	B – 6
D816	A – 7
D822	E – 3
D824	E – 5
D825	F – 4
D826	C – 7
D828	E – 3
D1501	F – 8
D1503	F – 8
D1504	F – 7

VARIABLE RESISTOR	
RV601	E – 1

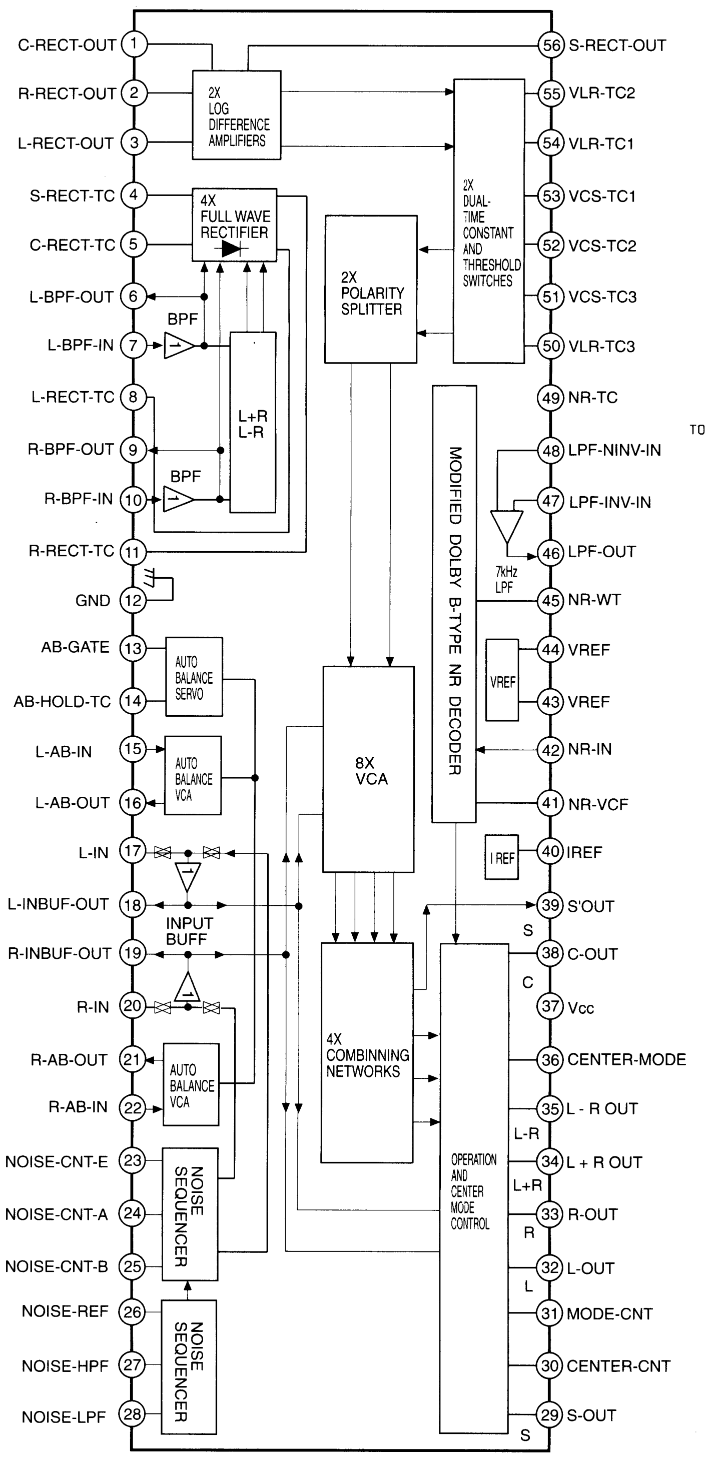

B-:SSAE2B<A/4>-A3.
IC3201 M69032P DOLBY PRO LOGIC
IC3202 MC14053BF-T2 MULTIPLEXER
IC3205 TDA6622-5 AUDIO PROCESSOR
IC3206 M50198-P DELAY
IC1251 TDA7317 GRAPHIC EQUALIZER
IC1101 TDA8732 NICAM DEMODULATOR
IC1102 SAA7282-ZP NICAM-DECODER
Q3203 2SA1037K SWITCH
Q3207 2SA1037K
Q3208 2SC2412K
Q1101 2SC2412K SIF-AMP
Q1102 2SC2412K SIF-AMP
Q1103 2SC2412K SIF-AMP
Q1107 2SC2412K R-AUDIO-AMP
Q1108 2SC2412K R-AUDIO-AMP
D3201 MTZJ-T-77-9.1C
D1101 DAP202K
D1103 1SV214
CN0227 6P WHT :S-MICRO
TO A BOARD CN0127
L OUT
R OUT
GND
L IN
R IN
CN0248 3P :S-MICRO
TO M2 BOARD CN1435
SDA 2
SCL
CN0246 3P WHT :S-MICRO
TO K1 BOARD CN1346
C OUT
S OUT
CN0201 20P WHT BTOB-P
TO A BOARD CN0101
SIF
+12V
+5V
SDA
+12V
+9V
+5V
MOUNTED FOR NICAM MODELS ONLY
SURROUND OUT
CENTER OUT
R AUDIO (NICAM)
L AUDIO (NICAM)
BPF
DIG 5V
ANA 5V
A GND
B GND
X3201 3.58MHz
X1101 8.192MHz
1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O


A3
NICAM DECODER
NICAM DEMODULATOR
GRAPHIC EQUALIZER
DOLBY
IC3206
M50198-P
DELAY
X3201
3.58MHz
Q3205
2SA1037
SWITCH
Q3206
2SC2412K
SWITCH
FB3201
+5V
IC3202
MC14053BF-T2
MULTIPLEXER
IC3204
BA4558F-T1
OP-AMP
IC3203
CXA1875C
IC CONTROLLER
Q3207
2SA1037K
Q3208
2SC2412K
Q3209
2SC2412K
SWITCH
IC1251
TDA7317
GRAPHIC EQUALIZER
Q1251
2SC2412
BUFFER
Q1252
2SC2412
BUFFER
+9V
+5V
D1101
DAP202K
IC1102
SAA7282-ZP
NICAM-DECODER
X1101
8.192MHz
D1102
1SV217
Q1104
2SC2412K
BUFFER-R
Q1105
2SC2412K
L-AUDIO-AMP
Q1106
2SC2412K
L-AUDIO-AMP
+12V
TO

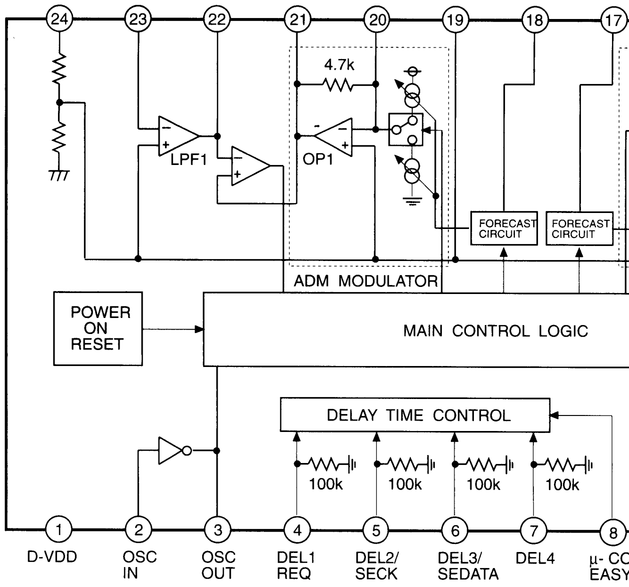
A3 BOARD *MARK

Model	KV-A2943E	KV-A2942U
BP1101	5.850MHz	6.552MHz
C1159	-	47P
CF1101	-	6.0MHz
CF1102	5.5MHz	-
JR1101	0 : CHIP	-
L1105	-	15MMh
X1102	11.700MHz	13.104MHz

A3 BOARD IC3201 M69032P


C-RECT-OUT 1
R-RECT-OUT 2
L-RECT-OUT 3
S-RECT-TC 4
C-RECT-TC 5
L-BPF-OUT 6
L-BPF-IN 7
L-RECT-TC 8
R-BPF-OUT 9
R-BPF-IN 10
R-RECT-TC 11
GND 12
AB-GATE 13
AB-HOLD-TC 14
L-AB-IN 15
L-AB-OUT 16
L-IN 17
L-INBUF-OUT 18
R-INBUF-OUT 19
R-IN 20
R-AB-OUT 21
R-AB-IN 22
NOISE-CNT-E 23
NOISE-CNT-A 24
NOISE-CNT-B 25
NOISE-REF 26
NOISE-HPF 27
NOISE-LPF 28
56 S-RECT-OUT
55 VLR-TC2
54 VLR-TC1
53 VCS-TC1
52 VCS-TC2
51 VCS-TC3
50 VLR-TC3
49 NR-TC
48 LPF-NINV-IN
47 LPF-INV-IN
46 LPF-OUT
45 NR-WT
44 VREF
43 VREF
42 NR-IN
41 NR-VCF
40 IREF
39 S'OUT
38 C-OUT
37 Vcc
36 CENTER-MODE
35 L - R OUT
34 L + R OUT
33 R-OUT
32 L-OUT
31 MODE-CNT
30 CENTER-CNT
29 S-OUT
2X LOG DIFFERENCE AMPLIFIERS
4X FULL WAVE RECTIFIER
BPF
BPF
L+R
L-R
2X POLARITY SPLITTER
2X DUAL-TIME CONSTANT AND THRESHOLD SWITCHES
MODIFIED DOLBY B-TYPE NR DECODER
7kHz LPF
VREF
IREF
AUTO BALANCE SERVO
AUTO BALANCE VCA
INPUT BUFF
AUTO BALANCE VCA
8X VCA
4X COMBINNING NETWORKS
OPERATION AND CENTER MODE CONTROL
NOISE SEQUENCER
NOISE SEQUENCER
S
C
L-R
L+R
R
L
S

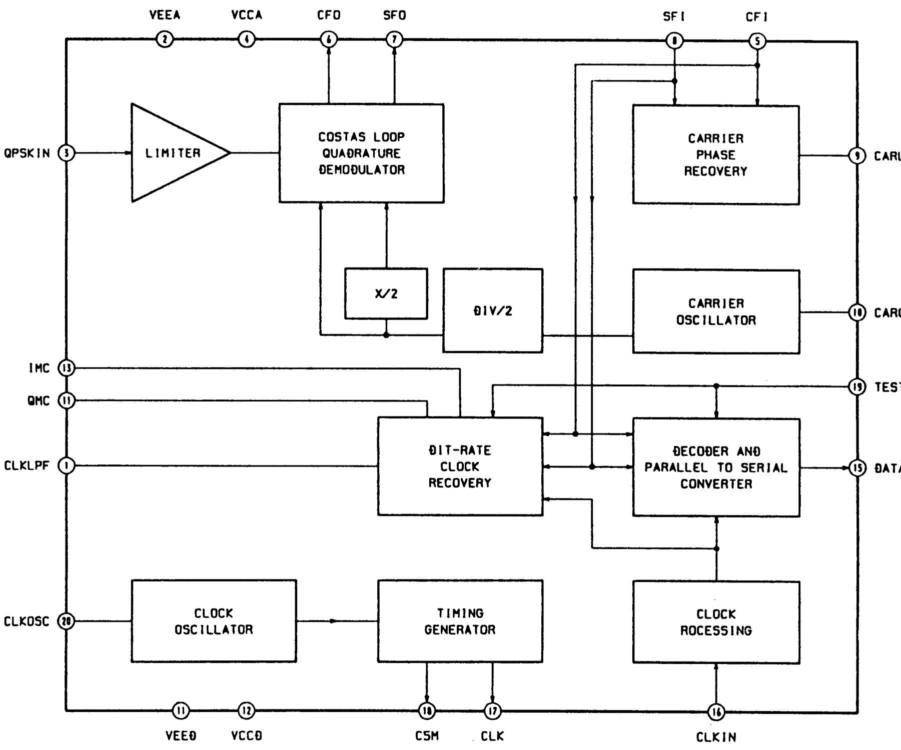
A3 BOARD IC3206 M50198P

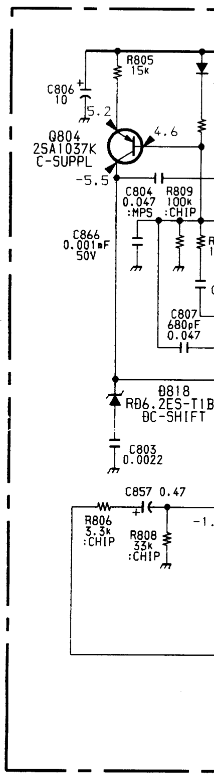

A - Vcc 24
LPF1 IN 23
LPF1 OUT 22
OP1 OUT 21
OP1 IN 20
REF 19
CC1 18
CC2 17
4.7k
LPF1
OP1
FORECAST CIRCUIT
FORECAST CIRCUIT
ADM MODULATOR
POWER ON RESET
MAIN CONTROL LOGIC
DELAY TIME CONTROL
100k
100k
100k
100k
1 D-VDD
2 OSC IN
3 OSC OUT
4 DEL1 REQ
5 DEL2/ SECK
6 DEL3/ SEDATA
7 DEL4
8 µ- CO EASY

A3 BOARD * MARK

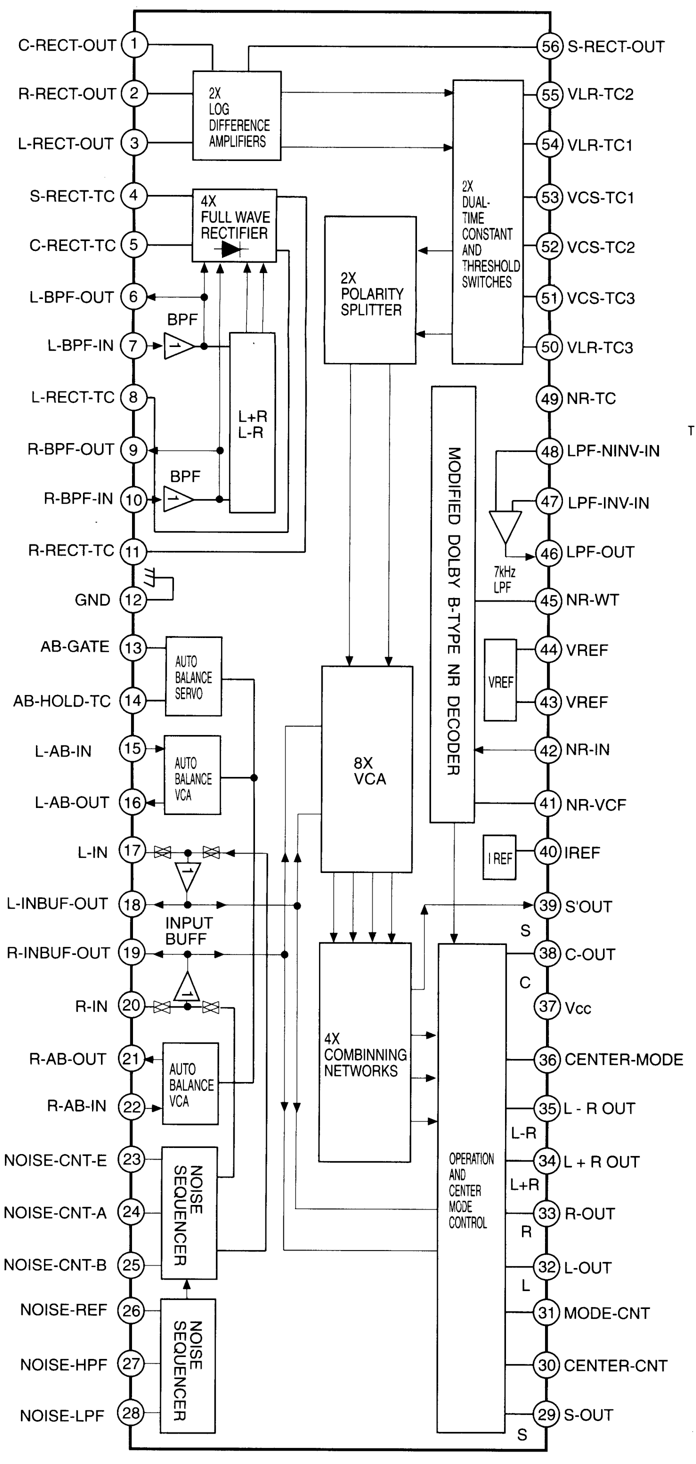
Model	KV-A2943E	KV-A2942U
BP1101	5.850MHz	6.552MHz
C1159	-	47P
CF1101	-	6.0MHz
CF1102	5.5MHz	-
JR1101	0 : CHIP	-
L1105	-	15MMh
X1102	11.700MHz	13.104MHz

A3 BOARD IC1101 TDA8732

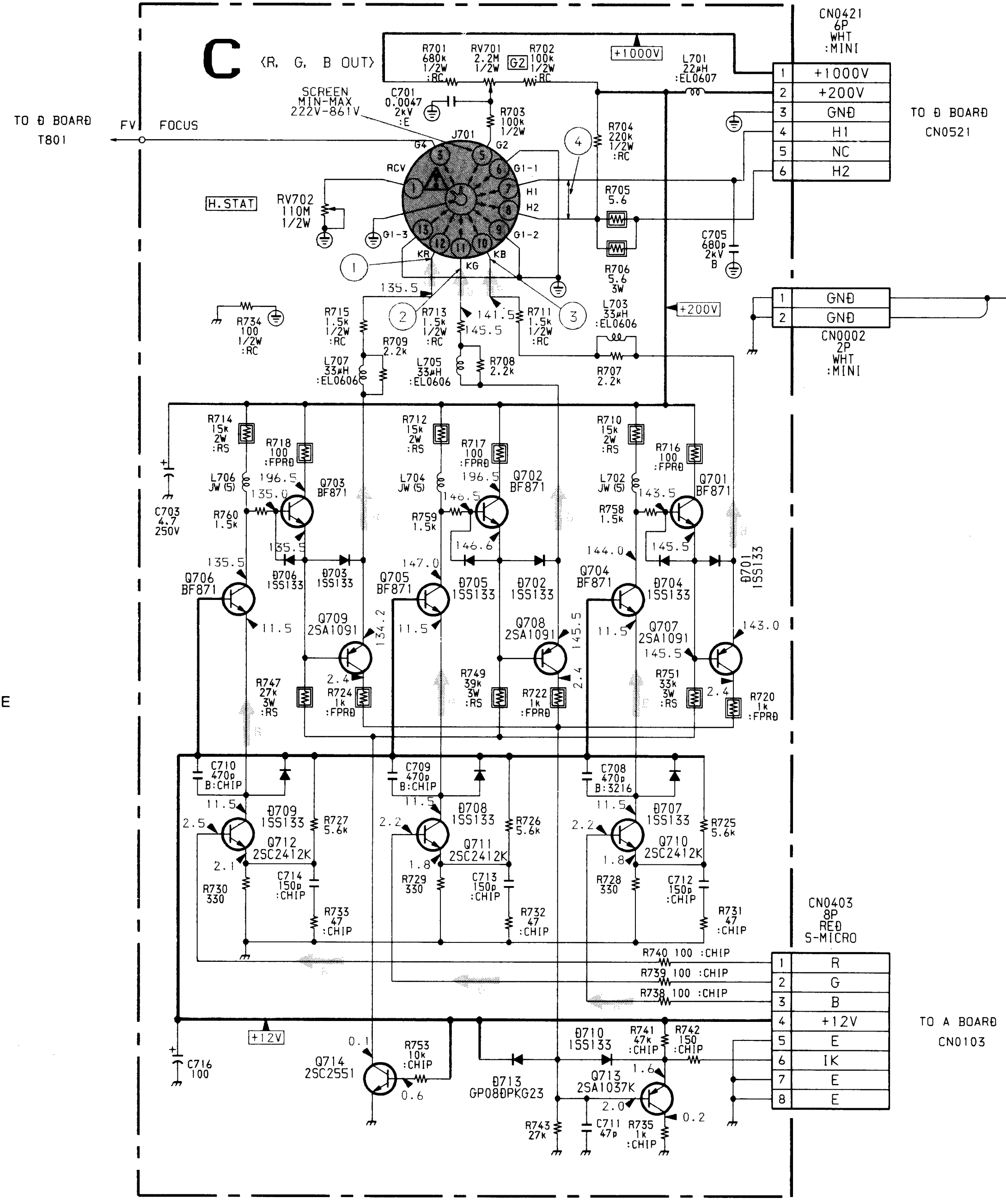

VEEA
VCCA
CFO
SFO
SFI
CFI
QPSKIN
LIMITER
COSTAS LOOP QUADRATURE DEMODULATOR
CARRIER PHASE RECOVERY
CARLPF
X/2
BIV/2
CARRIER OSCILLATOR
CAROSC
IHC
QHC
TEST
CLKLPF
BIT-RATE CLOCK RECOVERY
DECODER AND PARALLEL TO SERIAL CONVERTER
DATA
CLKOSC
CLOCK OSCILLATOR
TIMING GENERATOR
CLOCK ROCESSING
VEED
VCCD
CSM
CLK
CLKIN

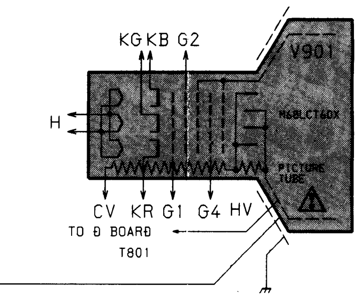

R805 15k
C806 10
Q804 2SA1037K C-SUPPL
C804 0.047 :MPS
R809 100k :CHIP
C866 0.001mF 50V
C807 680pF 0.047
D818 RD6.2ES-T1B DC-SHIFT
C803 0.0022
C857 0.47
R806 3.3k :CHIP
R808 33k :CHIP

A3 BOARD IC3201 M69032P

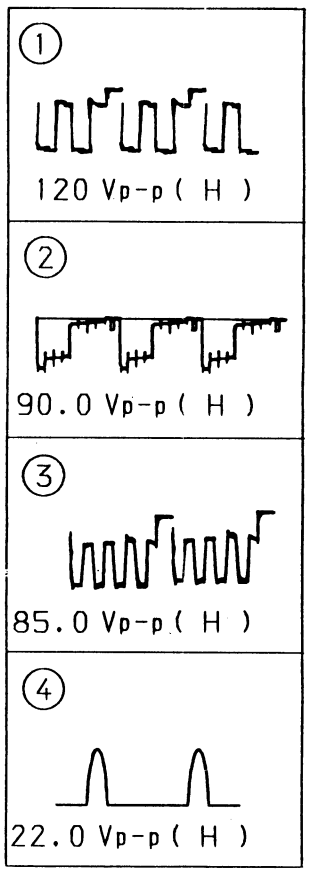

C-RECT-OUT 1
R-RECT-OUT 2
L-RECT-OUT 3
S-RECT-TC 4
C-RECT-TC 5
L-BPF-OUT 6
L-BPF-IN 7
L-RECT-TC 8
R-BPF-OUT 9
R-BPF-IN 10
R-RECT-TC 11
GND 12
AB-GATE 13
AB-HOLD-TC 14
L-AB-IN 15
L-AB-OUT 16
L-IN 17
L-INBUF-OUT 18
R-INBUF-OUT 19
R-IN 20
R-AB-OUT 21
R-AB-IN 22
NOISE-CNT-E 23
NOISE-CNT-A 24
NOISE-CNT-B 25
NOISE-REF 26
NOISE-HPF 27
NOISE-LPF 28
56 S-RECT-OUT
55 VLR-TC2
54 VLR-TC1
53 VCS-TC1
52 VCS-TC2
51 VCS-TC3
50 VLR-TC3
49 NR-TC
48 LPF-NINV-IN
47 LPF-INV-IN
46 LPF-OUT
45 NR-WT
44 VREF
43 VREF
42 NR-IN
41 NR-VCF
40 IREF
39 S'OUT
38 C-OUT
37 Vcc
36 CENTER-MODE
35 L - R OUT
34 L + R OUT
33 R-OUT
32 L-OUT
31 MODE-CNT
30 CENTER-CNT
29 S-OUT
2X LOG DIFFERENCE AMPLIFIERS
4X FULL WAVE RECTIFIER
BPF
L+R L-R
2X POLARITY SPLITTER
2X DUAL-TIME CONSTANT AND THRESHOLD SWITCHES
MODIFIED DOLBY B-TYPE NR DECODER
7kHz LPF
VREF
IREF
AUTO BALANCE SERVO
AUTO BALANCE VCA
8X VCA
INPUT BUFF
4X COMBINNING NETWORKS
OPERATION AND CENTER MODE CONTROL
NOISE SEQUENCER
S C L-R L+R R L S

B-:SSAE2B<A29>-C..


C (R, G, B OUT)
TO B BOARD T801
FV FOCUS
SCREEN MIN-MAX 222V-861V
R701 680k 1/2W :RC
RV701 2.2M 1/2W
R702 100k 1/2W :RC
+1000V
L701 22μH :EL0607
C701 0.0047 2kV :E
R703 100k 1/2W
J701
R704 220k 1/2W :RC
H.STAT
RV702 110M 1/2W
R705 5.6
C705 680p 2kV B
R706 5.6 3W
L703 33μH :EL0606
+200V
R734 100 1/2W :RC
R715 1.5k 1/2W :RC
R713 1.5k 1/2W :RC
R711 1.5k 1/2W :RC
R709 2.2k
R708 2.2k
R707 2.2k
L707 33μH :EL0606
L705 33μH :EL0606
R714 15k 2W :RS
R718 100 :FPRD
R712 15k 2W :RS
R717 100 :FPRD
R710 15k 2W :RS
R716 100 :FPRD
L706 JW(5)
L704 JW(5)
L702 JW(5)
Q703 BF871
Q702 BF871
Q701 BF871
R760 1.5k
R759 1.5k
R758 1.5k
C703 4.7 250V
Q706 BF871
D706 1SS133
D703 1SS133
Q705 BF871
D705 1SS133
D702 1SS133
Q704 BF871
D704 1SS133
D701 1SS133
Q709 2SA1091
Q708 2SA1091
Q707 2SA1091
R747 27k 3W :RS
R724 1k :FPRD
R749 39k 3W :RS
R722 1k :FPRD
R751 33k 3W :RS
R720 1k :FPRD
C710 470p B:CHIP
C709 470p B:CHIP
C708 470p B:3216
D709 1SS133
D708 1SS133
D707 1SS133
Q712 2SC2412K
Q711 2SC2412K
Q710 2SC2412K
R727 5.6k
R726 5.6k
R725 5.6k
C714 150p :CHIP
C713 150p :CHIP
C712 150p :CHIP
R730 330
R729 330
R728 330
R733 47 :CHIP
R732 47 :CHIP
R731 47 :CHIP
R740 100 :CHIP
R739 100 :CHIP
R738 100 :CHIP
C716 100
+12V
Q714 2SC2551
R753 10k :CHIP
D713 GP08DPKG23
D710 1SS133
R741 47k :CHIP
R742 150 :CHIP
Q713 2SA1037K
R743 27k
C711 47p
R735 1k :CHIP
CN0421 6P WHT :MINI
1 +1000V
2 +200V
3 GND
4 H1
5 NC
6 H2
TO B BOARD CN0521
1 GND
2 GND
CN0002 2P WHT :MINI
CN0403 8P RED S-MICRO
1 R
2 G
3 B
4 +12V
5 E
6 IK
7 E
8 E
TO A BOARD CN0103

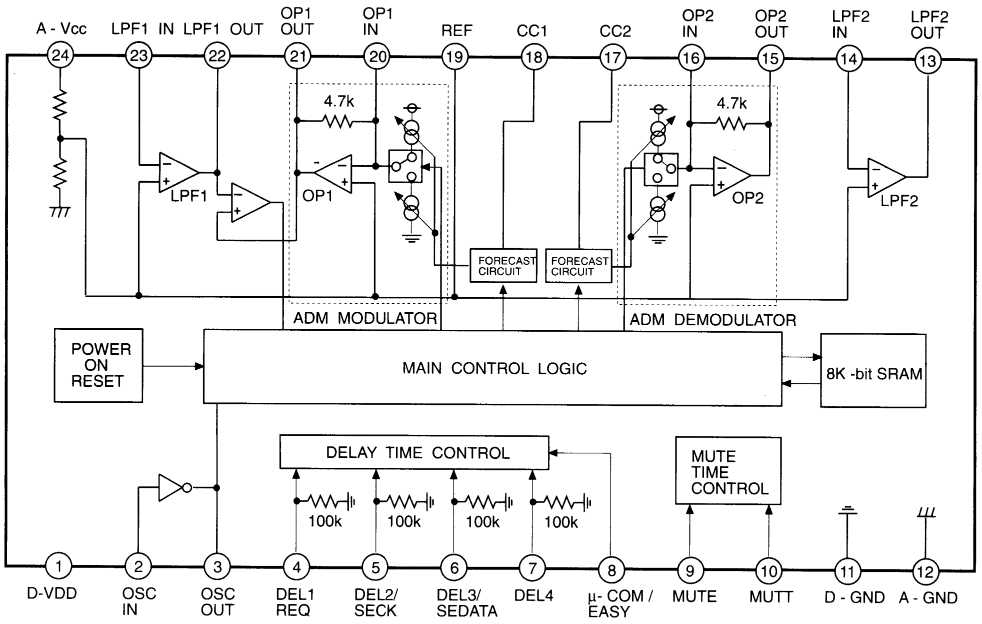

KG KB G2
V901
H
CV KR G1 G4 HV
TO B BOARD T801
PICTURE TUBE

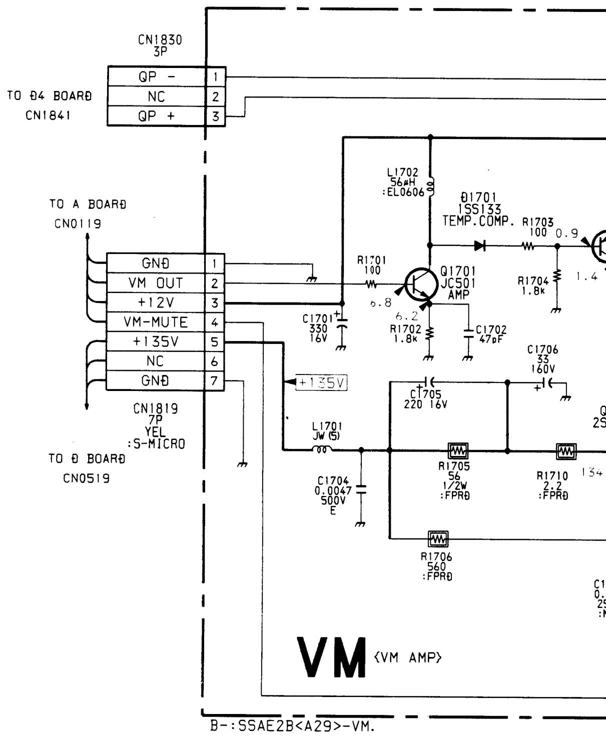
WAVEFORMS C BOARD



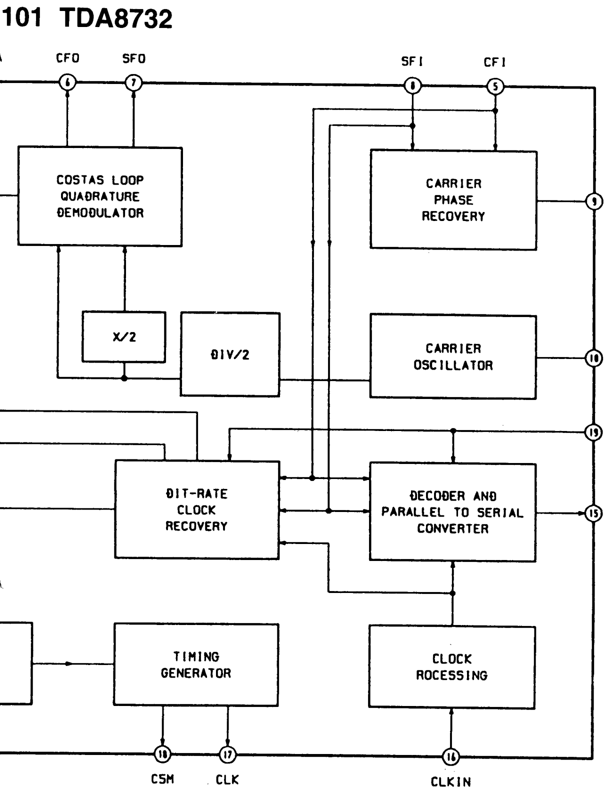
TO A BOARD CN0149
TO A3 BOARD CN0246

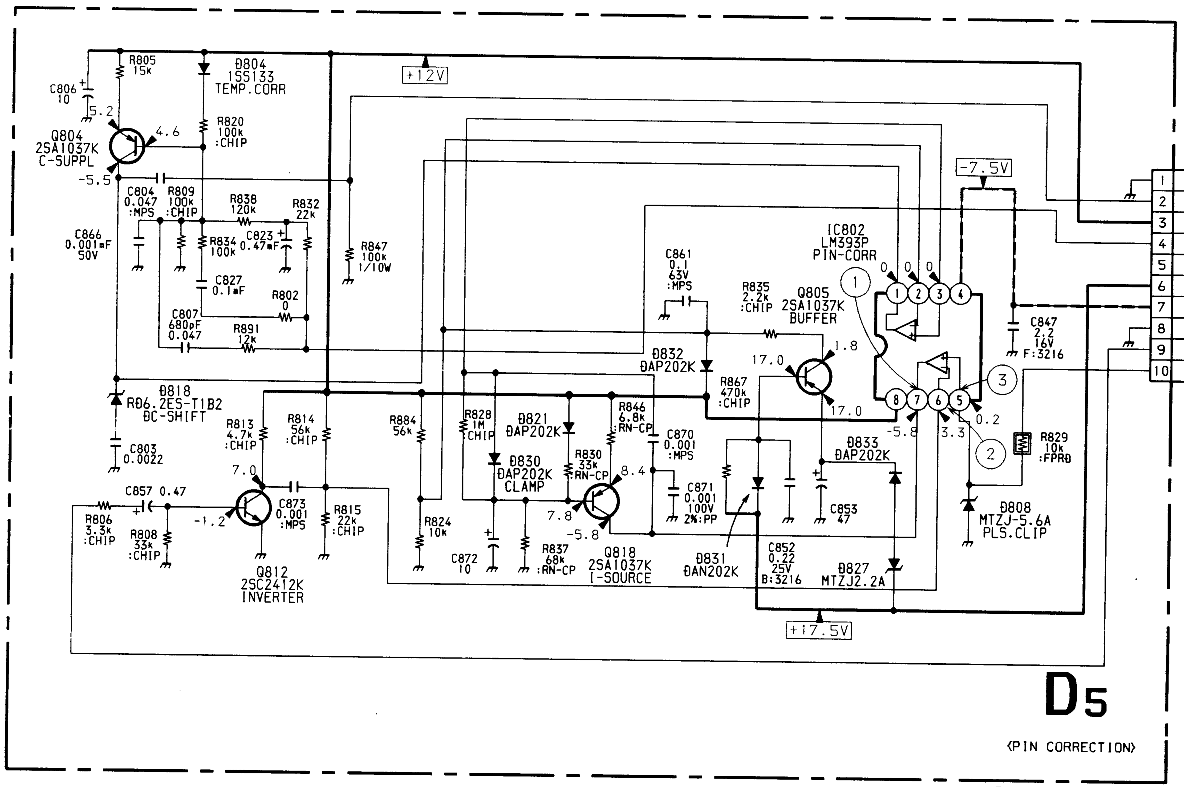
A3 BOARD IC3206 M50198P


A - Vcc 24
LPF1 IN 23
LPF1 OUT 22
OP1 OUT 21
OP1 IN 20
REF 19
CC1 18
CC2 17
OP2 IN 16
OP2 OUT 15
LPF2 IN 14
LPF2 OUT 13
4.7k
LPF1
OP1
OP2
LPF2
FORECAST CIRCUIT
ADM MODULATOR
ADM DEMODULATOR
POWER ON RESET
MAIN CONTROL LOGIC
8K -bit SRAM
DELAY TIME CONTROL
MUTE TIME CONTROL
100k
1 D-VDD
2 OSC IN
3 OSC OUT
4 DEL1 REQ
5 DEL2/ SECK
6 DEL3/ SEDATA
7 DEL4
8 μ- COM / EASY
9 MUTE
10 MUTT
11 D - GND
12 A - GND


CN1830 3P
1 QP -
2 NC
3 QP +
TO D4 BOARD CN1841
TO A BOARD CN0119
1 GND
2 VM OUT
3 +12V
4 VM-MUTE
5 +135V
6 NC
7 GND
CN1819 7P YEL :S-MICRO
TO B BOARD CN0519
L1702 56μH :EL0606
D1701 1SS133 TEMP.COMP.
R1703 100
R1701 100
Q1701 JC501 AMP
R1704 1.8k
C1701 330 16V
R1702 1.8k
C1702 47pF
C1706 33 160V
+135V
C1705 220 16V
L1701 JW(5)
R1705 56 1/2W :FPRD
R1710 2.2 :FPRD
C1704 0.0047 500V E
R1706 560 :FPRD
VM (VM AMP)
B-:SSAE2B<A29>-VM.

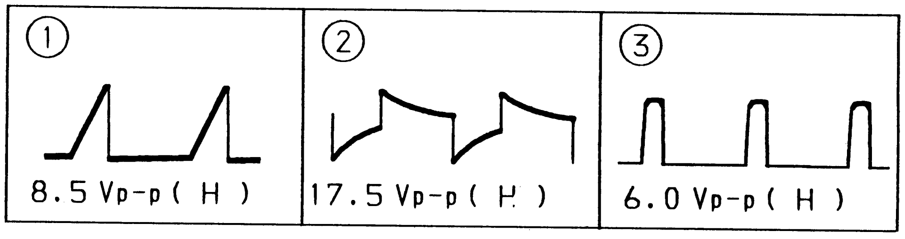
23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34

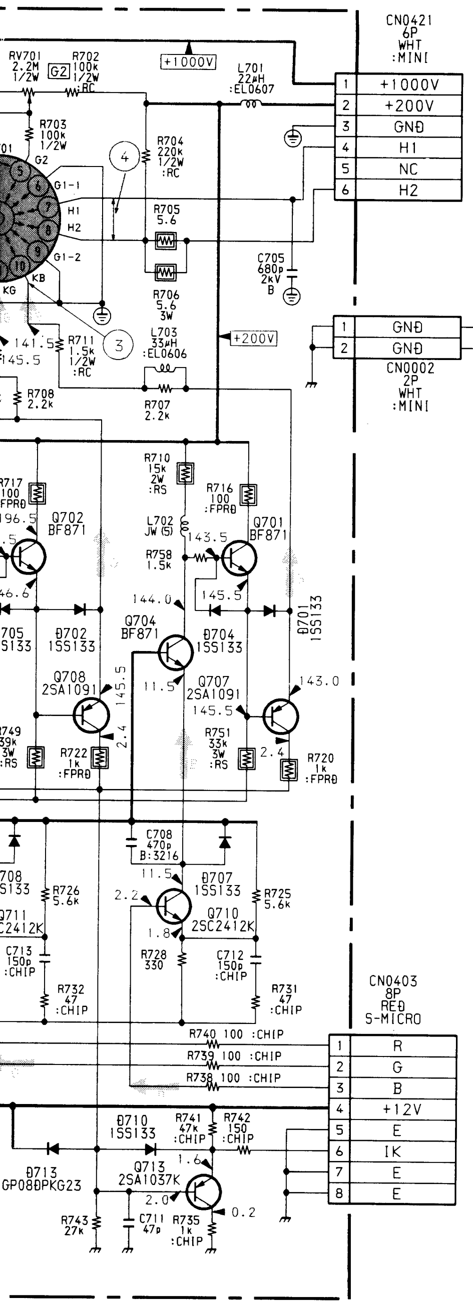

101 TDA8732
CFO
SFO
SFI
CFI
COSTAS LOOP QUADRATURE DEMODULATOR
CARRIER PHASE RECOVERY
CARLPF
X/2
DIV/2
CARRIER OSCILLATOR
CAROSC
TEST
BIT-RATE CLOCK RECOVERY
DECODER AND PARALLEL TO SERIAL CONVERTER
DATA
TIMING GENERATOR
CLOCK ROCESSING
CSM
CLK
CLKIN

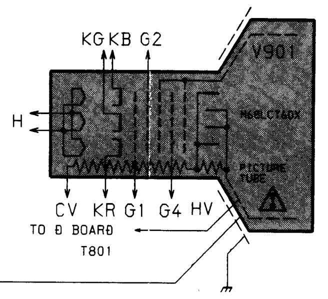

R805 15k
D804 1SS133 TEMP.CORR
C806 10
Q804 2SA1037K C-SUPPL
R820 100k :CHIP
+12V
C804 0.047 :MPS
R809 100k :CHIP
R838 120k
R832 22k
C866 0.001mF 50V
R834 100k
C823 0.47mF
C827 0.1mF
R802 0
C807 680pF 0.047
R891 12k
R847 100k 1/10W
D818 RD6.2ES-T1B2 DC-SHIFT
C803 0.0022
R813 4.7k :CHIP
R814 56k :CHIP
R884 56k
D828 1M :CHIP
D821 DAP202K
D830 DAP202K CLAMP
R846 6.8k :RN-CP
R830 33k :RN-CP
C870 0.001 :MPS
C871 0.001 100V :PP
C857 0.47
R806 3.3k :CHIP
R808 33k :CHIP
Q812 2SC2412K INVERTER
C873 0.001 :MPS
R815 22k :CHIP
R824 10k
C872 10
R837 68k :RN-CP
Q818 2SA1037K I-SOURCE
D831 DAN202K
C852 0.22 25V B:3216
D827 MTZJ2.2A
C853 47
C861 0.1 63V :MPS
R835 2.2k :CHIP
Q805 2SA1037K BUFFER
IC802 LM393P PIN-CORR
D832 DAP202K
R867 470k :CHIP
D833 DAP202K
C847 2.2 16V F:3216
R829 10k :FPRD
D808 MTZJ-5.6A PLS.CLIP
-7.5V
+17.5V
CN2044 10P BLK :BTOB
1 GND
2 T.SAW
3 +12V
4 ABL
5 N.C
6 +17.5V
7 -7.5V
8 GND
9 H.D
10 H.P
TO D BOARD CN0544
D5
(PIN CORRECTION)

B-:SSAE2B<A29>-D5.

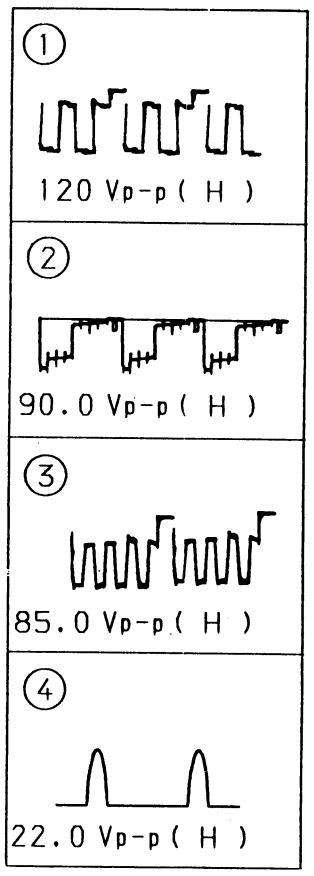
WAVEFORMS D5 BOARD


①
8.5 Vp-p (H)
②
17.5 Vp-p (H)
③
6.0 Vp-p (H)

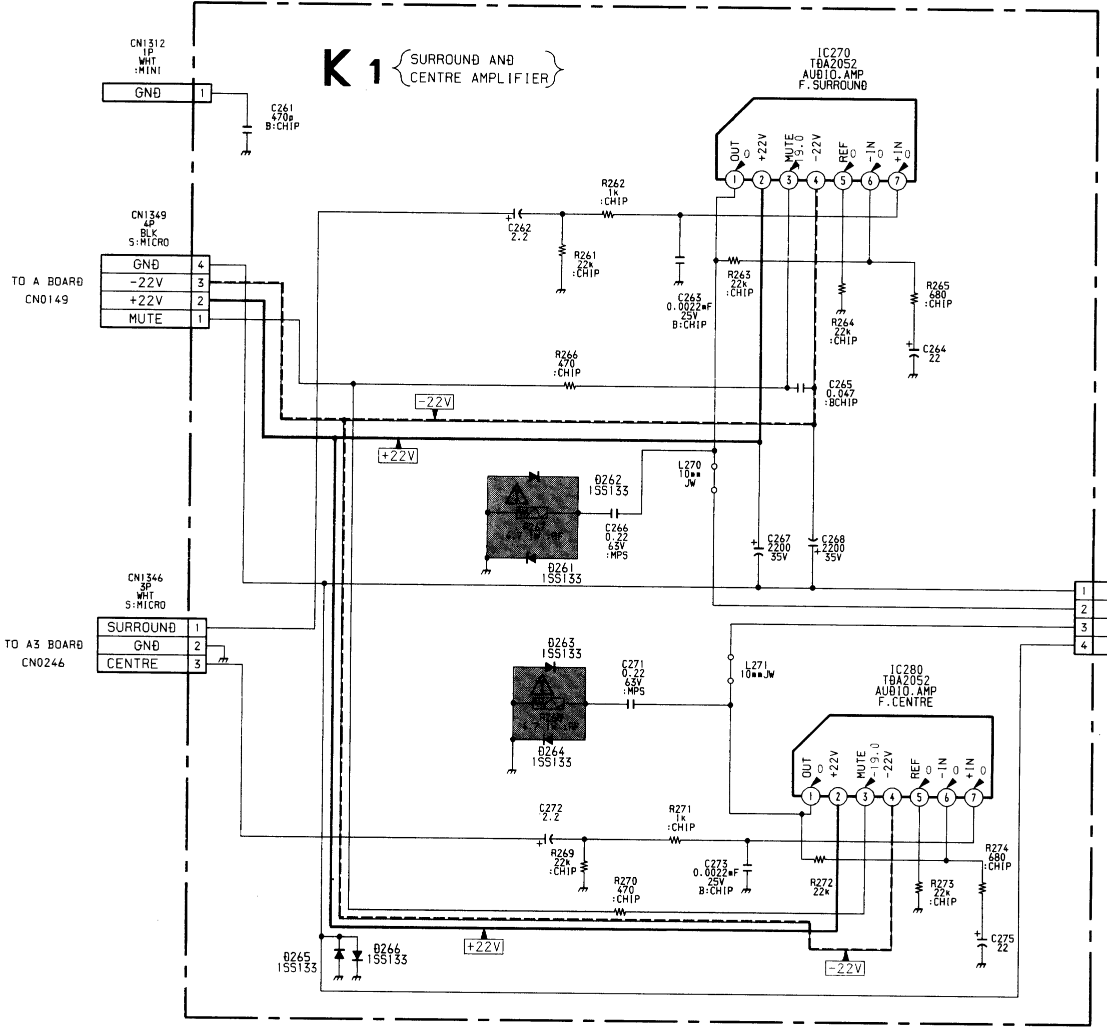

RV701 2.2M 1/2W
G2
R702 100k 1/2W
+1000V
L701 22mH :EL0607
CN0421 6P WHT :MINI
1 +1000V
2 +200V
3 GND
4 H1
5 NC
6 H2
TO D BOARD CN0521
R703 100k 1/2W
R704 220k 1/2W :RC
R705 5.6
R706 5.6 3W
C705 680p 2kV B
R711 1.5k 1/2W :RC
L703 33mH :EL0606
+200V
1 GND
2 GND
CN0002 2P WHT :MINI
R708 2.2k
R707 2.2k
R710 15k 2W :RS
R716 100 :FPRD
L702 JW
R758 1.5k
Q702 BF871
Q701 BF871
Q704 BF871
D702 1SS133
D704 1SS133
D701 1SS133
Q708 2SA1091
Q707 2SA1091
R751 33k 3W :RS
R722 1k :FPRD
R720 1k :FPRD
C708 470p B:3216
D707 1SS133
R726 5.6k
R725 5.6k
Q710 2SC2412K
C713 150p :CHIP
R728 330
C712 150p :CHIP
R732 47 :CHIP
R731 47 :CHIP
CN0403 8P RED S-MICRO
R740 100 :CHIP
R739 100 :CHIP
R738 100 :CHIP
1 R
2 G
3 B
4 +12V
5 E
6 IK
7 E
8 E
TO A BOARD CN0103
D710 1SS133
R741 47k :CHIP
R742 150 :CHIP
Q713 2SA1037K
C711 47p
R735 1k :CHIP
R743 27k

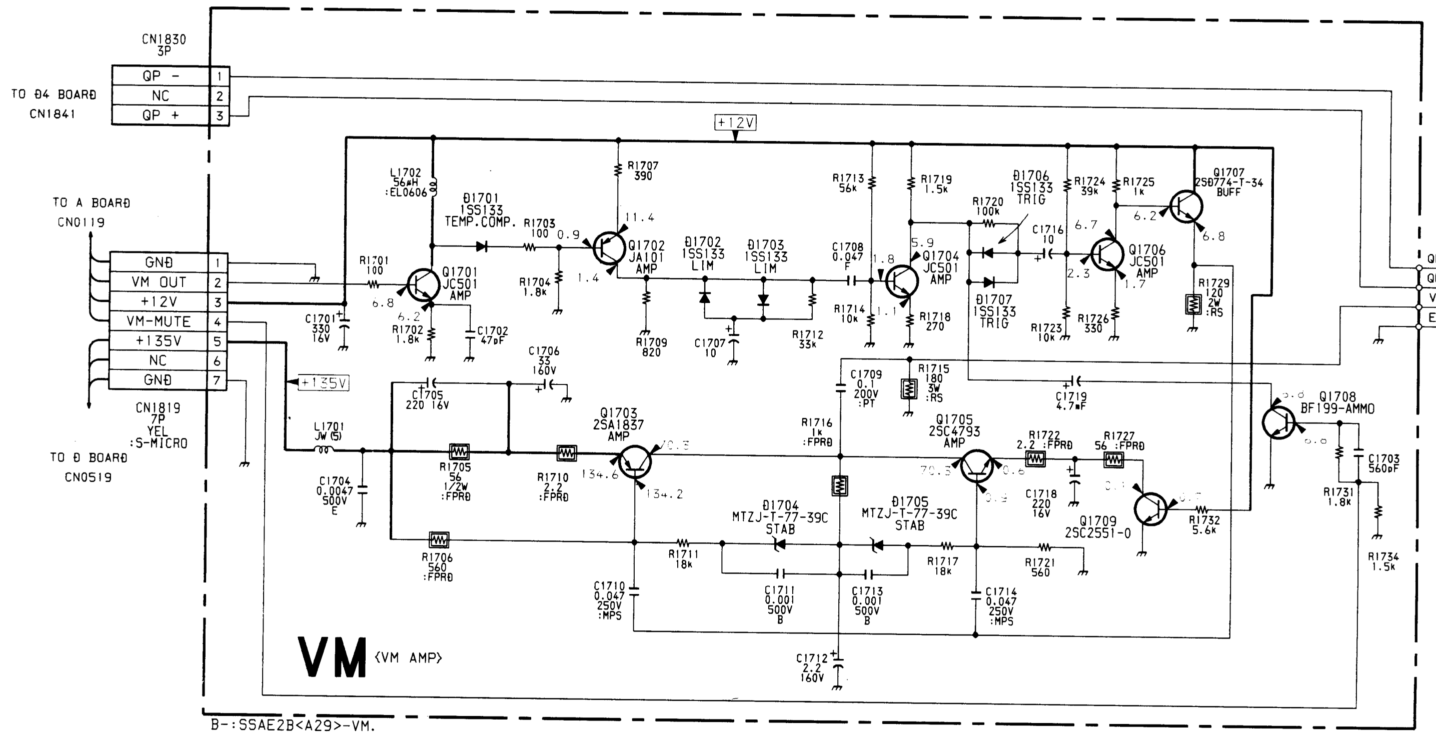

KG KB G2
V901
H
M68LCT40X
PICTURE TUBE
CV KR G1 G4 HV
TO D BOARD T801

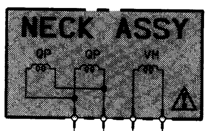
WAVEFORMS C BOARD


①
120 Vp-p (H)
②
90.0 Vp-p (H)
③
85.0 Vp-p (H)
④
22.0 Vp-p (H)

B-:SSAE2B<A/4>-K1.


K 1 (SURROUND AND CENTRE AMPLIFIER)
CN1312 1P WHT :MINI
GND
C261 470p B:CHIP
IC270 TDA2052 AUDIO.AMP F.SURROUND
OUT +22V MUTE -22V REF -IN +IN
R262 1k :CHIP
C262 2.2
R261 22k :CHIP
C263 0.0022mF 25V B:CHIP
R263 22k :CHIP
R265 680 :CHIP
R264 22k :CHIP
C264 22
CN1349 4P BLK S:MICRO
4 GND
3 -22V
2 +22V
1 MUTE
TO A BOARD CN0149
R266 470 :CHIP
C265 0.047 :BCHIP
-22V
+22V
D262 1SS133
L270 10mm JW
C266 0.22 63V :MPS
D261 1SS133
C267 2200 35V
C268 2200 35V
CN1351 4P WHT S:MICRO
1 GND
2 S OUT
3 C OUT
4 LR-
TO J BOARD CN1251
CN1346 3P WHT S:MICRO
SURROUND
GND
CENTRE
TO A3 BOARD CN0246
D263 1SS133
C271 0.22 63V :MPS
L271 10mm JW
IC280 TDA2052 AUDIO.AMP F.CENTRE
D264 1SS133
C272 2.2
R271 1k :CHIP
R269 22k :CHIP
R270 470 :CHIP
C273 0.0022mF 25V B:CHIP
R272 22k
R273 22k :CHIP
R274 680 :CHIP
C275 22
D265 1SS133
D266 1SS133


CN1830 3P
QP -
NC
QP +
TO D4 BOARD CN1841
+12V
TO A BOARD CN0119
1 GND
2 VM OUT
3 +12V
4 VM-MUTE
5 +135V
6 NC
7 GND
CN1819 7P YEL :S-MICRO
TO D BOARD CN0519
L1702 56mH :EL0606
D1701 1SS133 TEMP.COMP.
R1707 390
R1703 100
Q1702 JA101 AMP
R1701 100
Q1701 JC501 AMP
R1704 1.8k
C1701 330 16V
R1702 1.8k
C1702 47pF
C1706 33 160V
D1702 1SS133 LIM
D1703 1SS133 LIM
R1709 820
C1707 10
C1708 0.047 F
Q1704 JC501 AMP
R1714 10k
R1718 270
R1712 33k
R1713 56k
R1719 1.5k
R1720 100k
D1706 1SS133 TRIG
C1716 10
R1724 39k
R1725 1k
Q1707 2SD774-T-34 BUFF
Q1706 JC501 AMP
D1707 1SS133 TRIG
R1723 10k
R1726 330
R1729 120 3W :RS
+135V
C1705 220 16V
L1701 JW
R1705 56 1/2W :FPRD
Q1703 2SA1837 AMP
R1710 2.2 :FPRD
C1704 0.0047 500V E
R1706 560 :FPRD
C1709 0.1 200V :PT
R1715 180 3W :RS
R1716 1k :FPRD
Q1705 2SC4793 AMP
R1722 2.2 :FPRD
R1727 56 :FPRD
C1719 4.7mF
D1704 MTZJ-T-77-39C STAB
D1705 MTZJ-T-77-39C STAB
C1718 220 16V
Q1709 2SC2551-O
R1732 5.6k
Q1708 BF199-AMMO
C1703 560pF
R1731 1.8k
R1734 1.5k
R1711 18k
R1717 18k
R1721 560
C1710 0.047 250V :MPS
C1711 0.001 500V B
C1713 0.001 500V B
C1714 0.047 250V :MPS
C1712 2.2 160V
VM (VM AMP)
QP-
QP+
VM
E


NECK ASSY
QP
QP
VM

B-:SSAE2B<A29>-VM.

A3 [NICAM DECODER
NICAM DEMODULATOR
GRAPHIC EQUALIZER, DOLBY]

K1 [SURROUND AND
CENTRE AMPLIFIER]

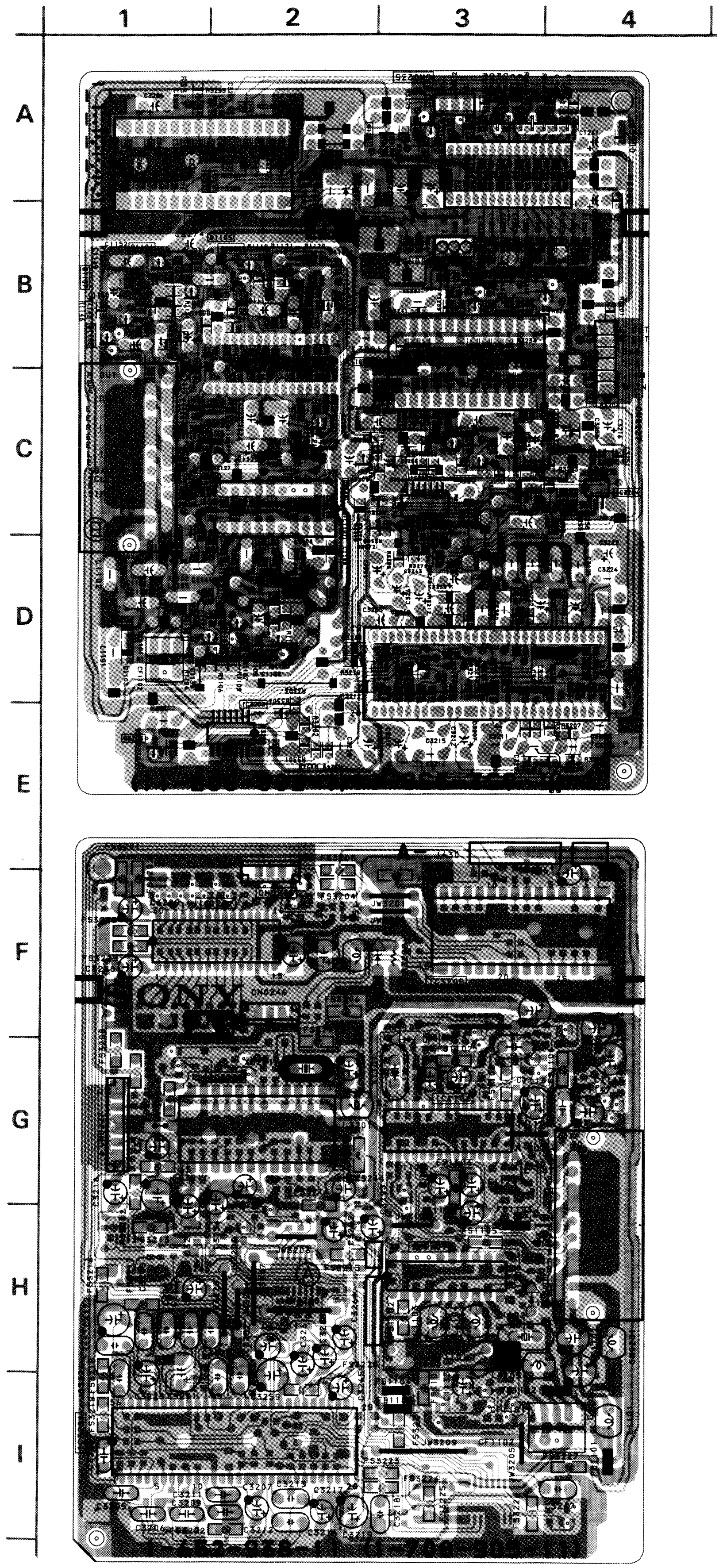
D5 [PIN CORRECTION]

C [R.G.B. OUT]

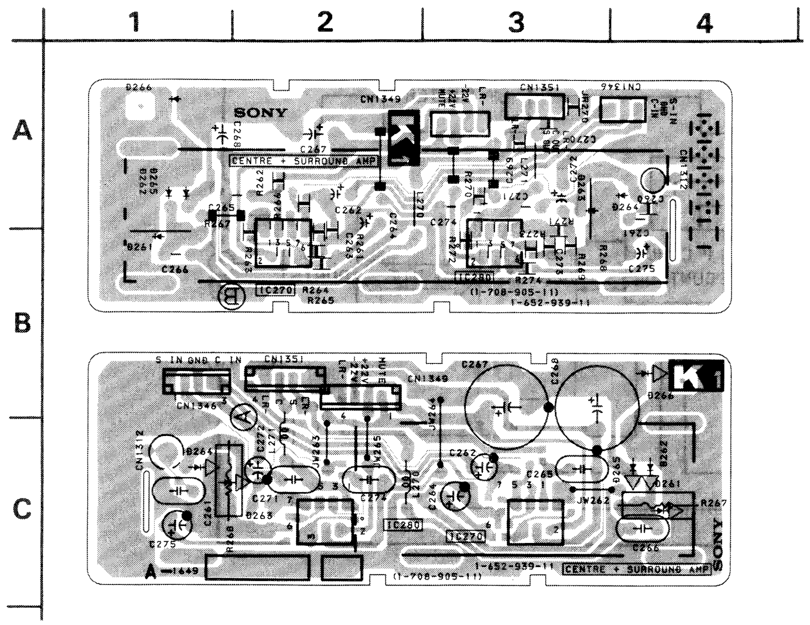
VM [VM AMP]

D4 [V - PIN Q P]

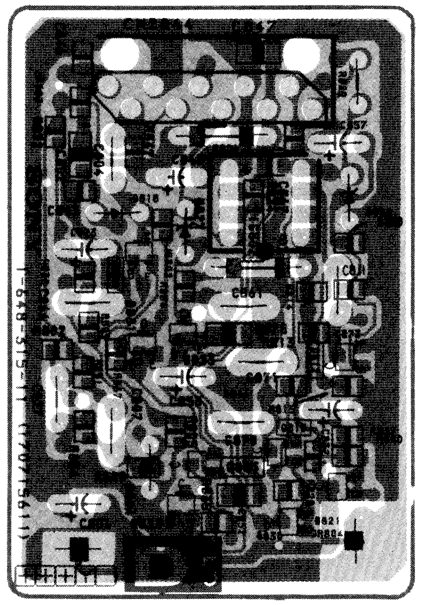
– A3 BOARD –


1
2
3
4
A
B
C
D
E
F
G
H
I
SONY

– K1 BOARD –


1
2
3
4
A
B
C
SONY
K1
CENTRE + SURROUND AMP
CN1349
CN1351
CN1346
IC270
IC280
1-652-939-11
(1-708-905-11)

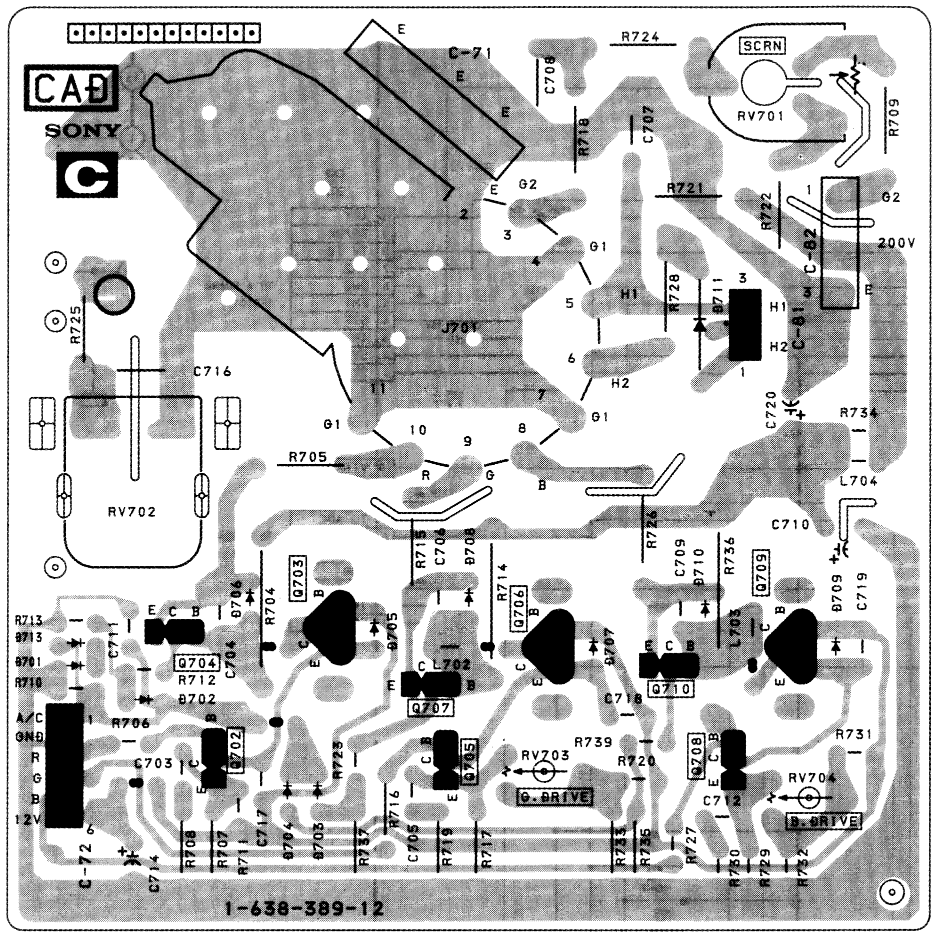
– D5 BOARD –



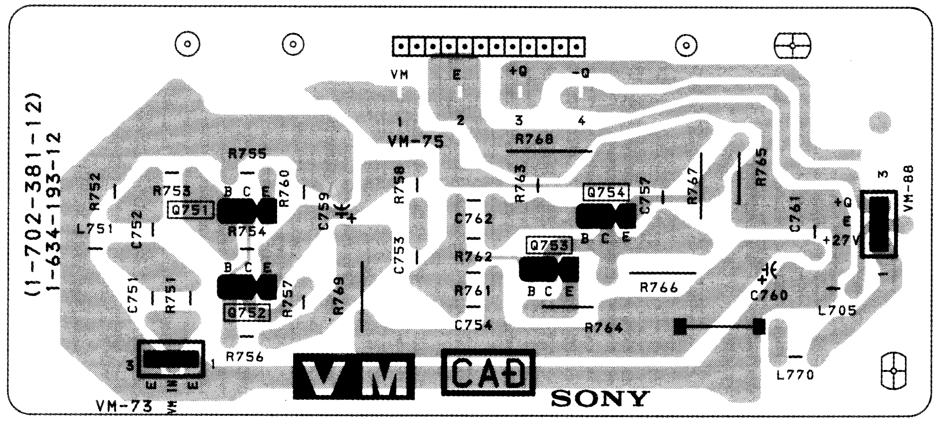
Note :

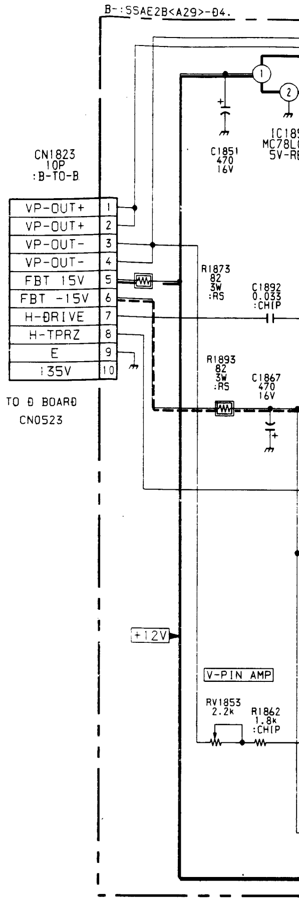
- ▨ : Pattern from the side which enables seeing.
- ░ : Pattern of the rear side.

– C BOARD –


CAD
SONY
C
C-71
R724
SCRN
RV701
R709
C708
R718
C707
R721
R722
C-82
G2
200V
J701
R725
C716
R705
RV702
R734
L704
C710
C720
Q703
Q706
Q709
Q704
Q707
Q710
Q702
Q705
Q708
RV703
G.DRIVE
RV704
B.DRIVE
R731
C-72
1-638-389-12

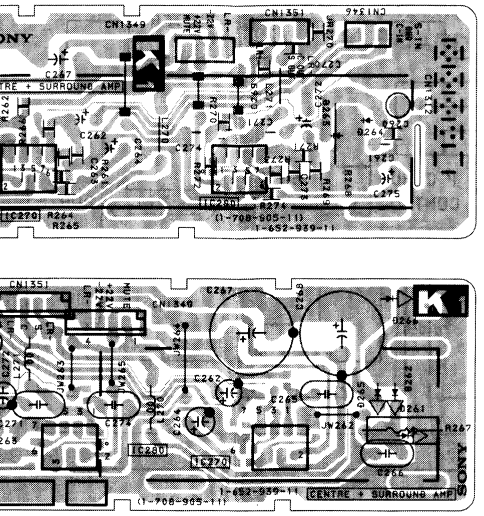
– VM BOARD –


VM-75
VM-73
VM-88
Q751
Q752
Q753
Q754
R768
R766
R764
C760
C761
L705
L770
L751
R756
+27V
VM
CAD
SONY
(1-702-381-12)
1-634-193-12

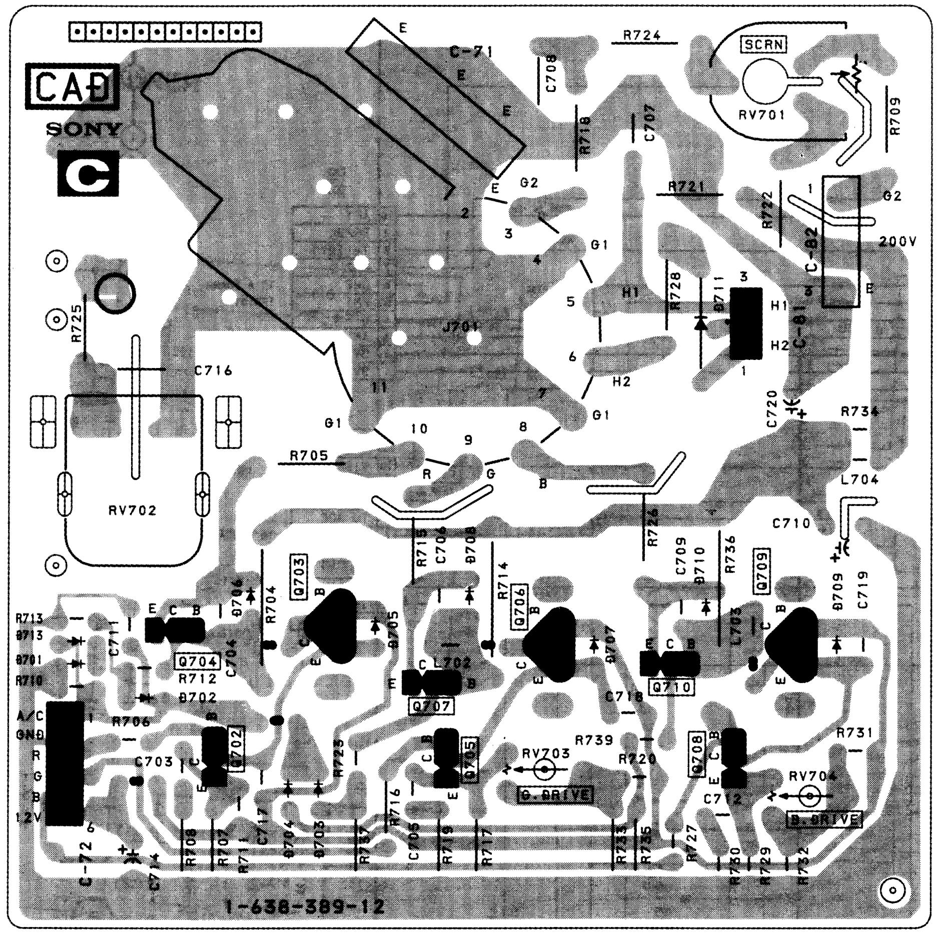

CN1823
10P
:B-TO-B
VP-OUT+
VP-OUT+
VP-OUT-
VP-OUT-
FBT 15V
FBT -15V
H-DRIVE
H-TPRZ
E
135V
TO B BOARD
CN0523
+12V
V-PIN AMP

ORRECTION] **C** [R.G.B. OUT] **VM** [VM AMP] **D4** [V - PIN Q P]

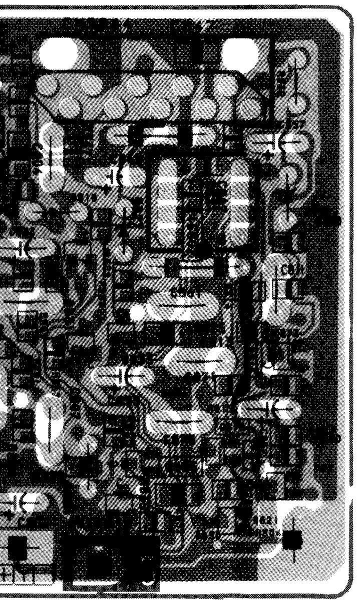
2 3 4


CN1351
CN1349
K1
1-708-905-11
1-652-939-11
CENTRE + SURROUND AMP
SONY

- C BOARD -


CAD
SONY
C
SCRN
RV701
RV702
J701
C716
R724
R709
R705
200V
L704
C710
Q703
Q704
Q705
Q706
Q707
Q708
Q709
Q710
RV703
G.DRIVE
RV704
B.DRIVE
C-72
1-638-389-12

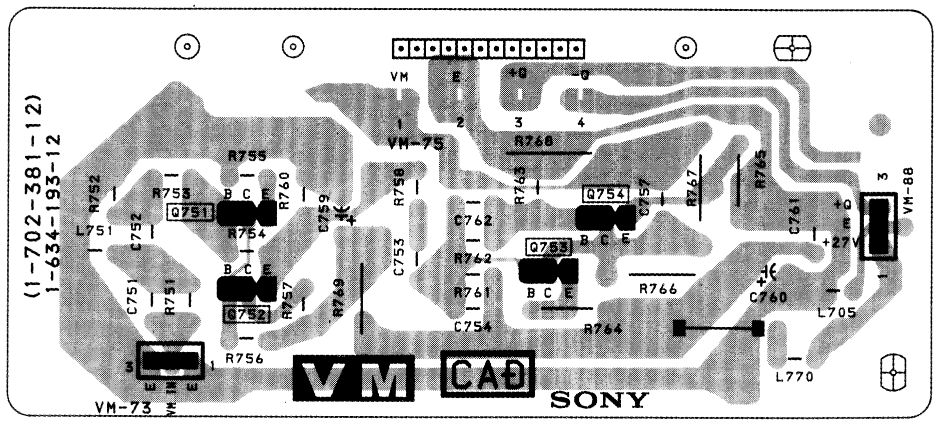
5 BOARD -

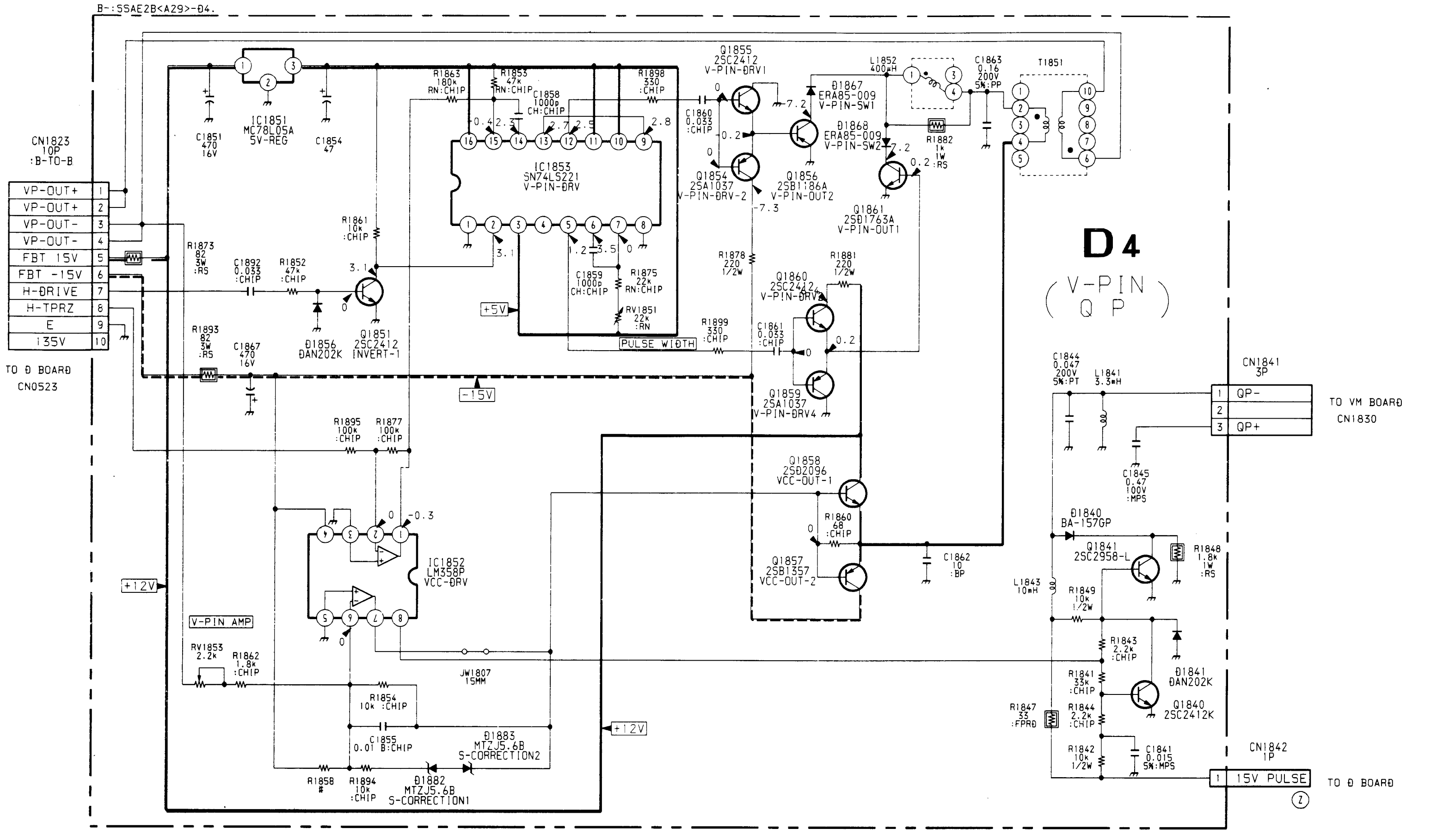


▨ : Pattern from the side which enables seeing.

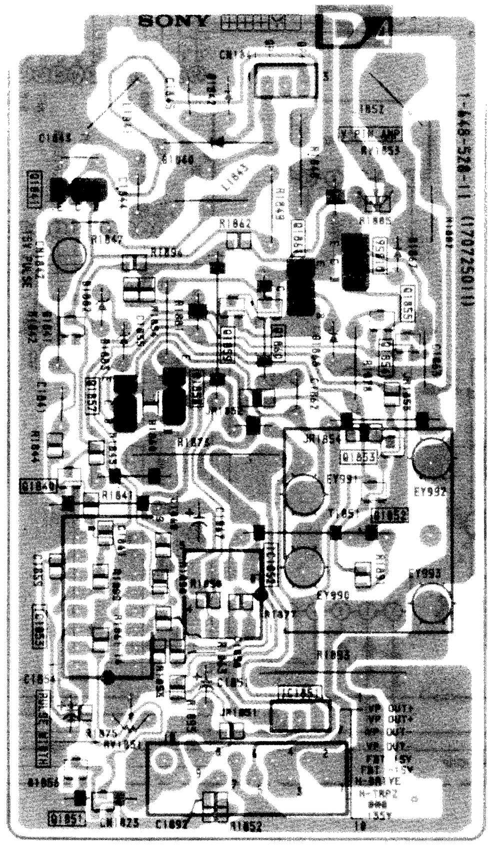
░ : Pattern of the rear side.

- VM BOARD -

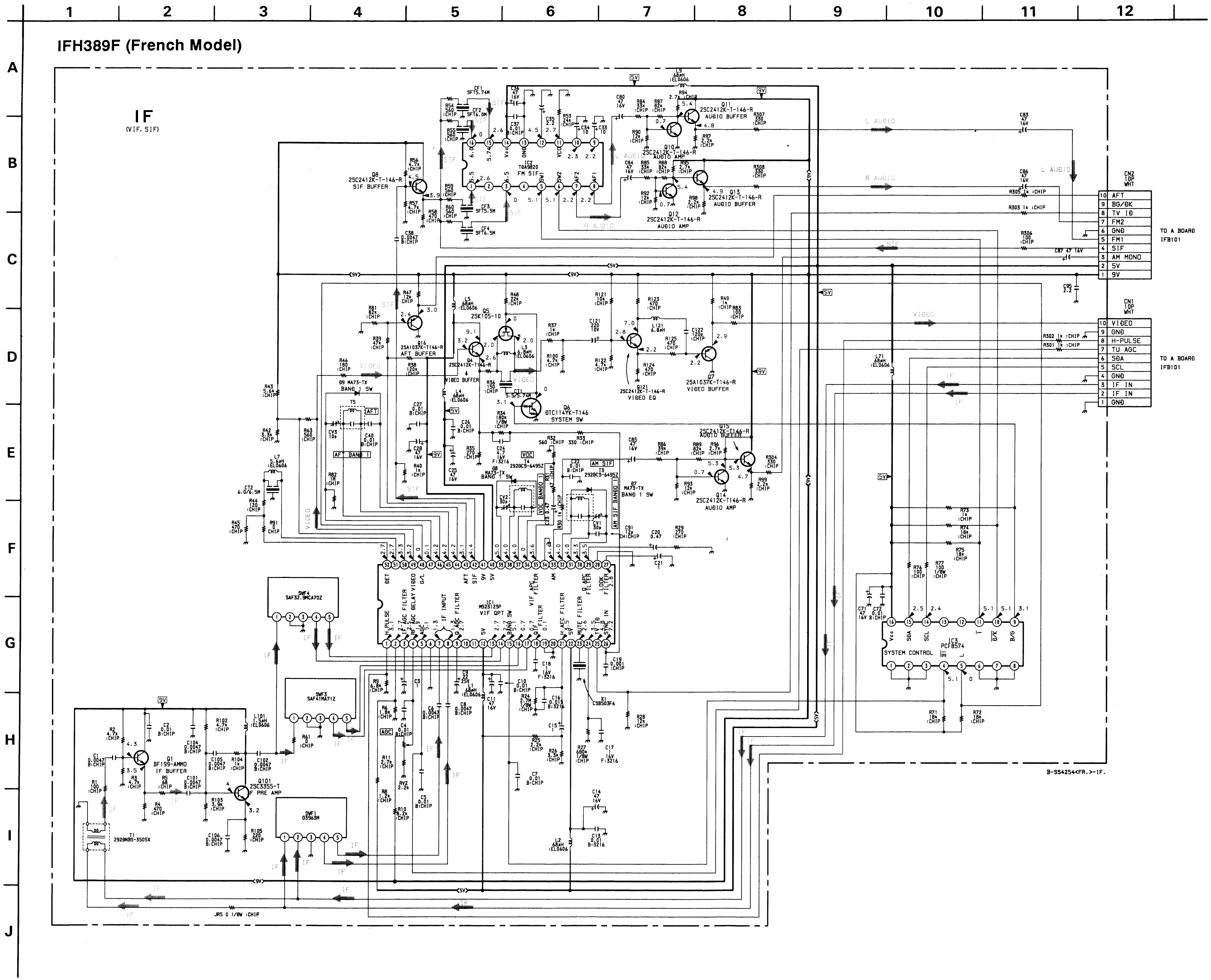

VM-75
VM-73
VM-88
Q751
Q752
Q753
Q754
L751
L705
L770
+27V
(1-702-381-12)
1-634-193-12
VM
CAD
SONY


B-:SSAE2B<A29>-04.
CN1823 10P :B-TO-B
VP-OUT+
VP-OUT+
VP-OUT-
VP-OUT-
FBT 15V
FBT -15V
H-DRIVE
H-TPRZ
E
135V
TO B BOARD CN0523
IC1851 MC78L05A 5V-REG
IC1853 SN74LS221 V-PIN-DRV
IC1852 LM358P VCC-DRV
Q1851 2SC2412 INVERT-1
Q1855 2SC2412 V-PIN-DRV1
Q1854 2SA1037 V-PIN-DRV-2
Q1856 2SB1186A V-PIN-OUT2
Q1861 2SB1763A V-PIN-OUT1
Q1860 2SC2412 V-PIN-DRV3
Q1859 2SA1037 V-PIN-DRV4
Q1858 2SD2096 VCC-OUT-1
Q1857 2SB1357 VCC-OUT-2
D1867 ERA85-009 V-PIN-SW1
D1868 ERA85-009 V-PIN-SW2
D1856 DAN202K
D1883 MTZJ5.6B S-CORRECTION2
D1882 MTZJ5.6B S-CORRECTION1
T1851
PULSE WIDTH
V-PIN AMP
+5V
-15V
+12V
D4
(V-PIN Q P)
CN1841 3P
QP-
QP+
TO VM BOARD CN1830
D1840 BA-157GP
Q1841 2SC2958-L
D1841 DAN202K
Q1840 2SC2412K
CN1842 1P
15V PULSE
TO B BOARD

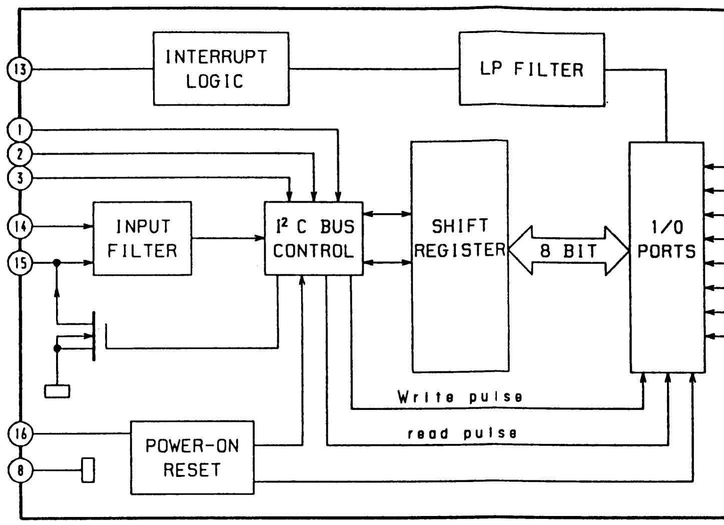
- D4 BOARD -

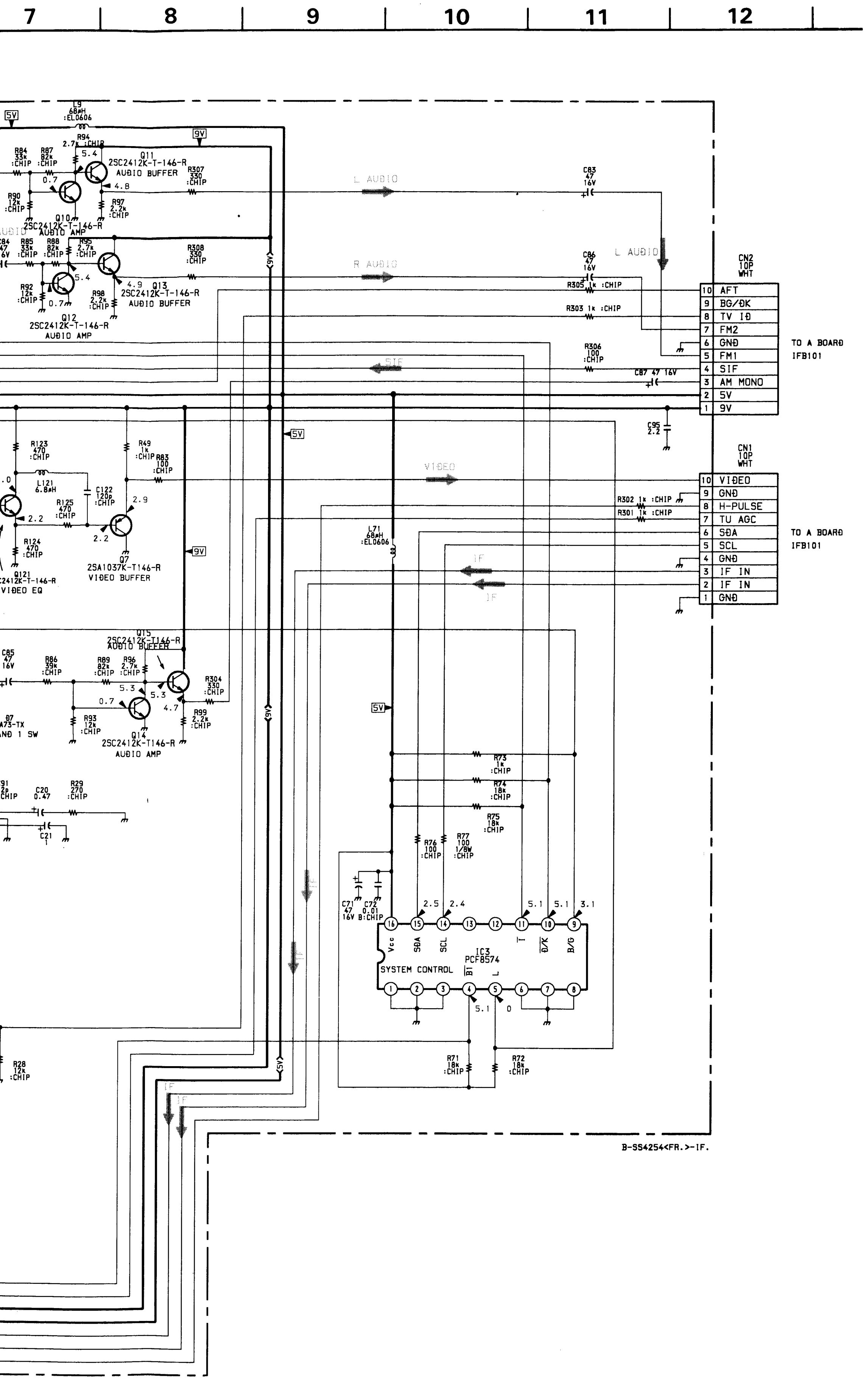

SONY
D4
1-648-528-11 (1707250)

IFH389F (French Model)

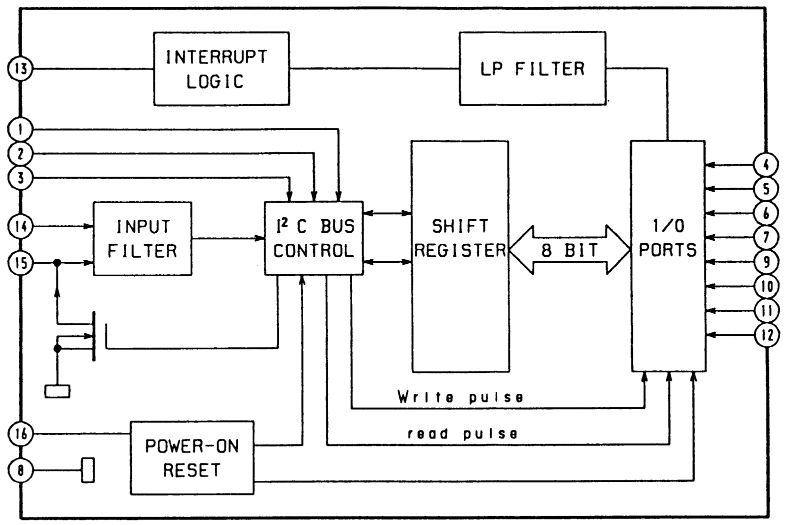

1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
I
J
IF
(VIF, SIF)
IC1 M52312SP VIF DET
IC2 TDA9820 FM SIF
IC3 PCF8574 SYSTEM CONTROL
Q1 BF199-AMMO IF BUFFER
Q101 2SC3355-T IF PRE AMP
Q4 2SC2412K-T-146-R VIDEO BUFFER
Q5 2SK105-10
Q6 DTC114YK-T146 SYSTEM SW
Q7 2SA1037K-T146-R VIDEO BUFFER
Q8 2SC2412K-T-146-R SIF BUFFER
Q10 2SC2412K-T-146-R AUDIO AMP
Q11 2SC2412K-T-146-R AUDIO BUFFER
Q12 2SC2412K-T-146-R AUDIO AMP
Q13 2SC2412K-T-146-R AUDIO BUFFER
Q14 2SC2412K-T-146-R AUDIO AMP
Q15 2SC2412K-T-146-R AUDIO BUFFER
Q16 2SA1037K-T146-R AFT BUFFER
Q121 2SC2412K-T-146-R VIDEO EQ
SWF1 G3963M
SWF3 SAF41MA71Z
SWF4 SAF32.9MCA70Z
T1 2928NBS-3505X
X1 CSB503F6
CN2 10P WHT
10 AFT
9 BG/DK
8 TV I8
7 FM2
6 GND
5 FM1
4 SIF
3 AM MONO
2 5V
1 9V
TO A BOARD IFB101
CN1 10P WHT
10 VIDEO
9 GND
8 H-PULSE
7 TU AGC
6 SDA
5 SCL
4 GND
3 IF IN
2 IF IN
1 GND
TO A BOARD IFB101
L AUDIO
R AUDIO
SIF
VIDEO
IF
9V
5V
AFT
AGC
VCO
AM SIF
B-SS4254<FR.>-IF.

IF BOARD IC3 PC8574 (French Model)


13
1
2
3
14
15
16
8
INTERRUPT LOGIC
LP FILTER
INPUT FILTER
I² C BUS CONTROL
SHIFT REGISTER
8 BIT
I/O PORTS
POWER-ON RESET
Write pulse
read pulse


7
8
9
10
11
12
L9 68μH :EL0606
R94 2.7k :CHIP
Q11 2SC2412K-T-146-R AUDIO BUFFER
Q10 2SC2412K-T-146-R AUDIO AMP
Q13 2SC2412K-T-146-R AUDIO BUFFER
Q12 2SC2412K-T-146-R AUDIO AMP
L AUDIO
R AUDIO
C83 47 16V
C86 47 16V
R307 330 :CHIP
R308 330 :CHIP
R305 1k :CHIP
R303 1k :CHIP
R306 100 :CHIP
C87 47 16V
C95 2.2
CN2 10P WHT
10 AFT
9 BG/DK
8 TV ID
7 FM2
6 GND
5 FM1
4 SIF
3 AM MONO
2 5V
1 9V
TO A BOARD IFB101
SIF
VIDEO
R123 470 :CHIP
R49 1k :CHIP
R83 100 :CHIP
L121 6.8μH
C122 120p :CHIP
R125 470 :CHIP
R124 470 :CHIP
Q121 2SC2412K-T-146-R VIDEO EQ
Q7 2SA1037K-T146-R VIDEO BUFFER
CN1 10P WHT
10 VIDEO
9 GND
8 H-PULSE
7 TU AGC
6 SDA
5 SCL
4 GND
3 IF IN
2 IF IN
1 GND
R302 1k :CHIP
R301 1k :CHIP
TO A BOARD IFB101
L71 68μH :EL0606
IF
Q15 2SC2412K-T146-R AUDIO BUFFER
Q14 2SC2412K-T146-R AUDIO AMP
R304 330 :CHIP
R99 2.2k :CHIP
R93 12k :CHIP
C85 47 16V
R86 39k :CHIP
R89 82k :CHIP
R96 2.7k :CHIP
R29 270 :CHIP
C20 0.47
C21 1
R28 12k :CHIP
R73 1k :CHIP
R74 18k :CHIP
R75 18k :CHIP
R76 100 :CHIP
R77 100 1/8W :CHIP
C71 47 16V
C72 0.01 B:CHIP
IC3 PCF8574 SYSTEM CONTROL
Vcc SDA SCL
R71 18k :CHIP
R72 18k :CHIP
5V
9V
B-SS4254<FR.>-IF.

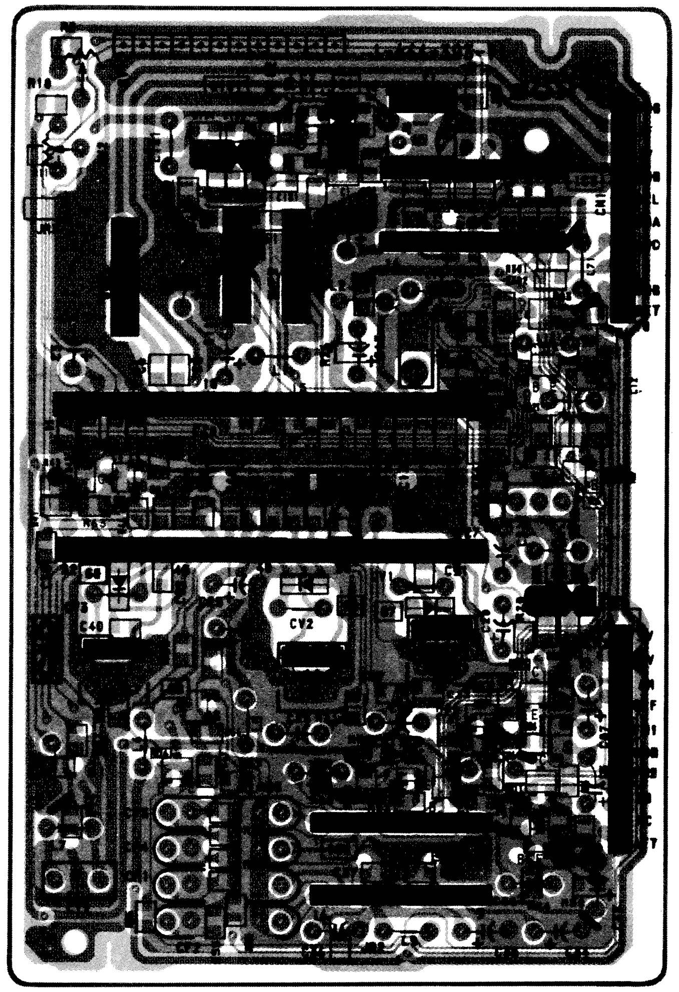
IF BOARD IC3 PC8574 (French Model)


INTERRUPT LOGIC
LP FILTER
INPUT FILTER
I² C BUS CONTROL
SHIFT REGISTER
8 BIT
I/O PORTS
POWER-ON RESET
Write pulse
read pulse
13
1
2
3
14
15
16
8
4
5
6
7
9
10
11
12

IF

[VIF, SIF]

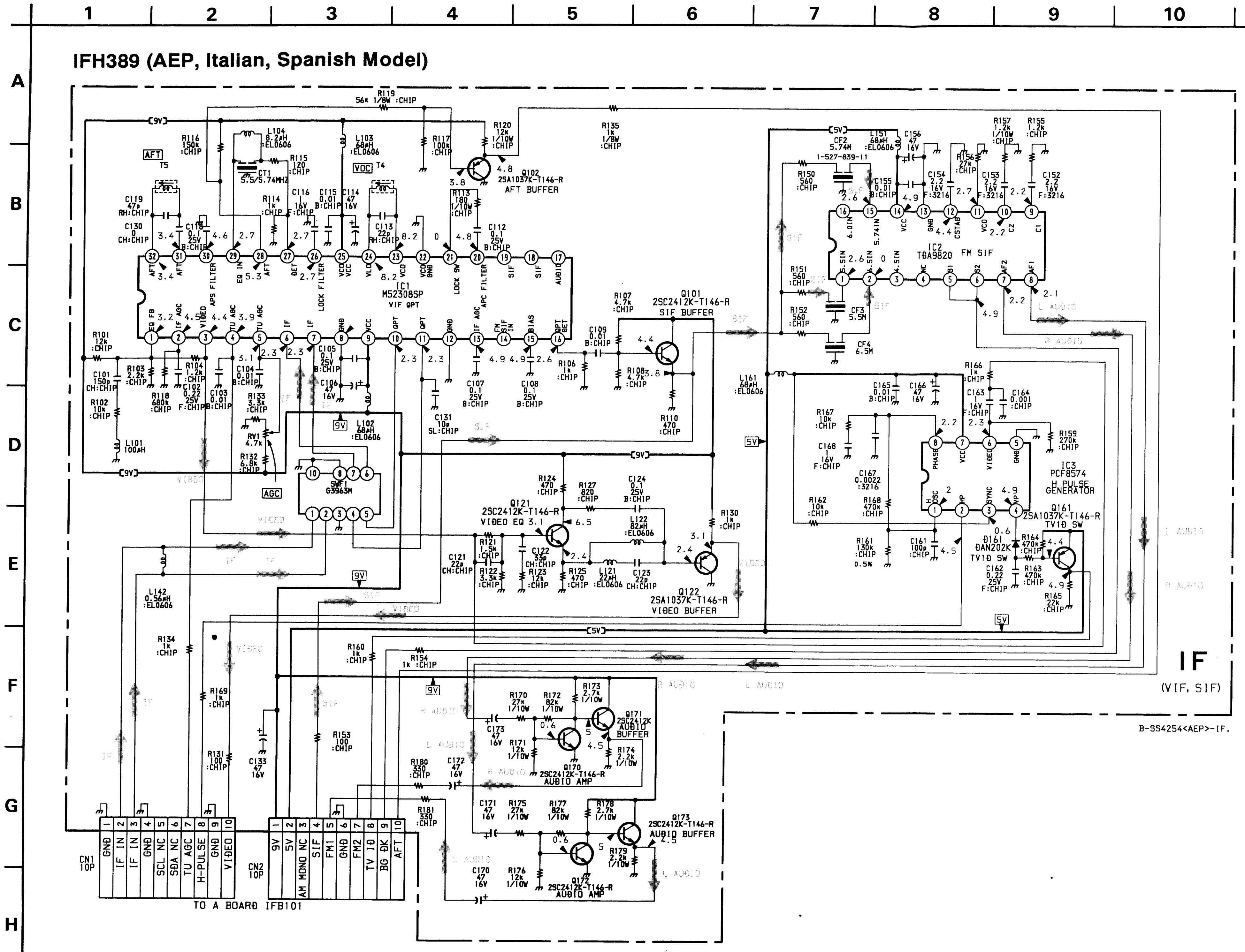
– IF BOARD – (French Model)


CN1
CN2
CV2
C40

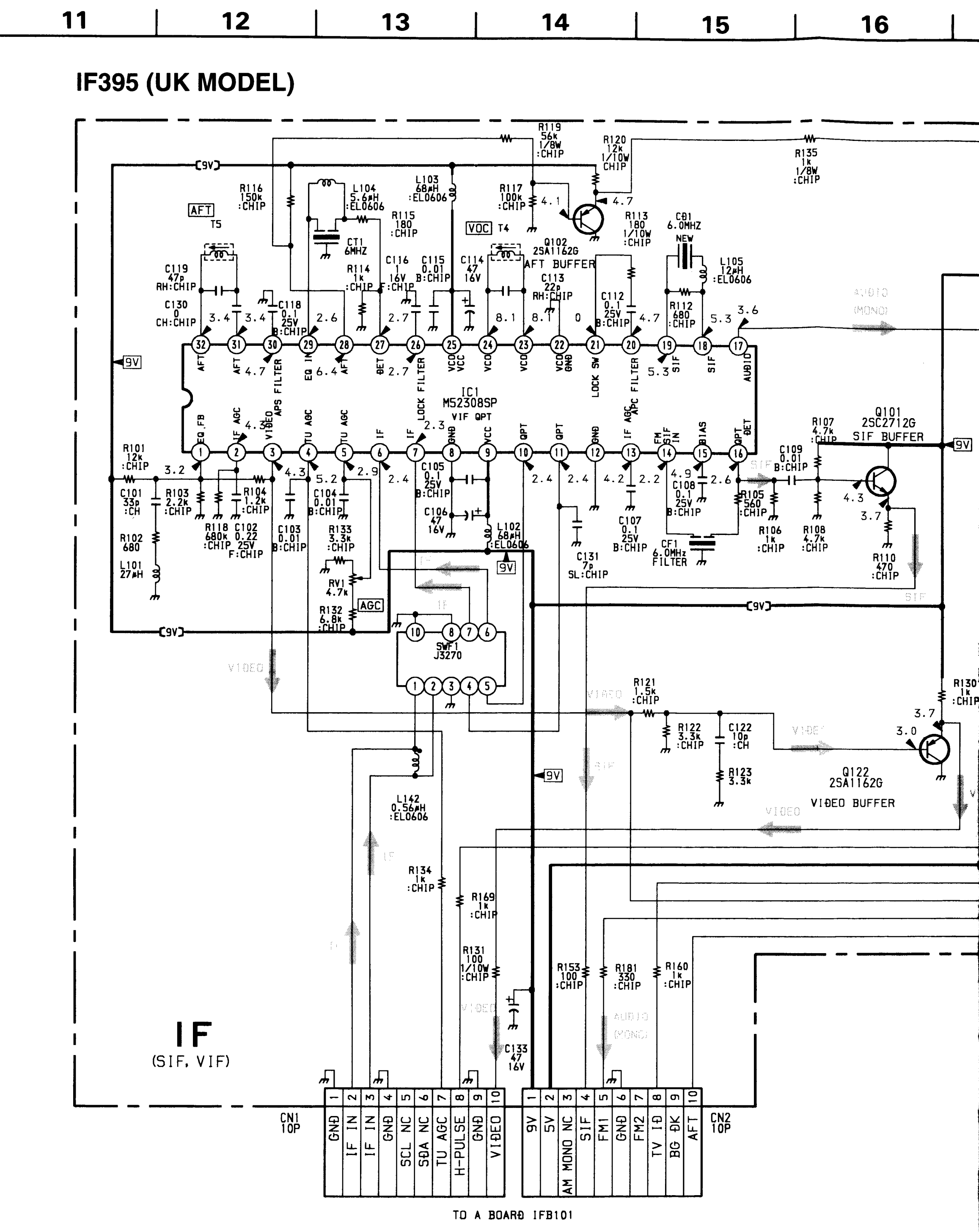
Note :

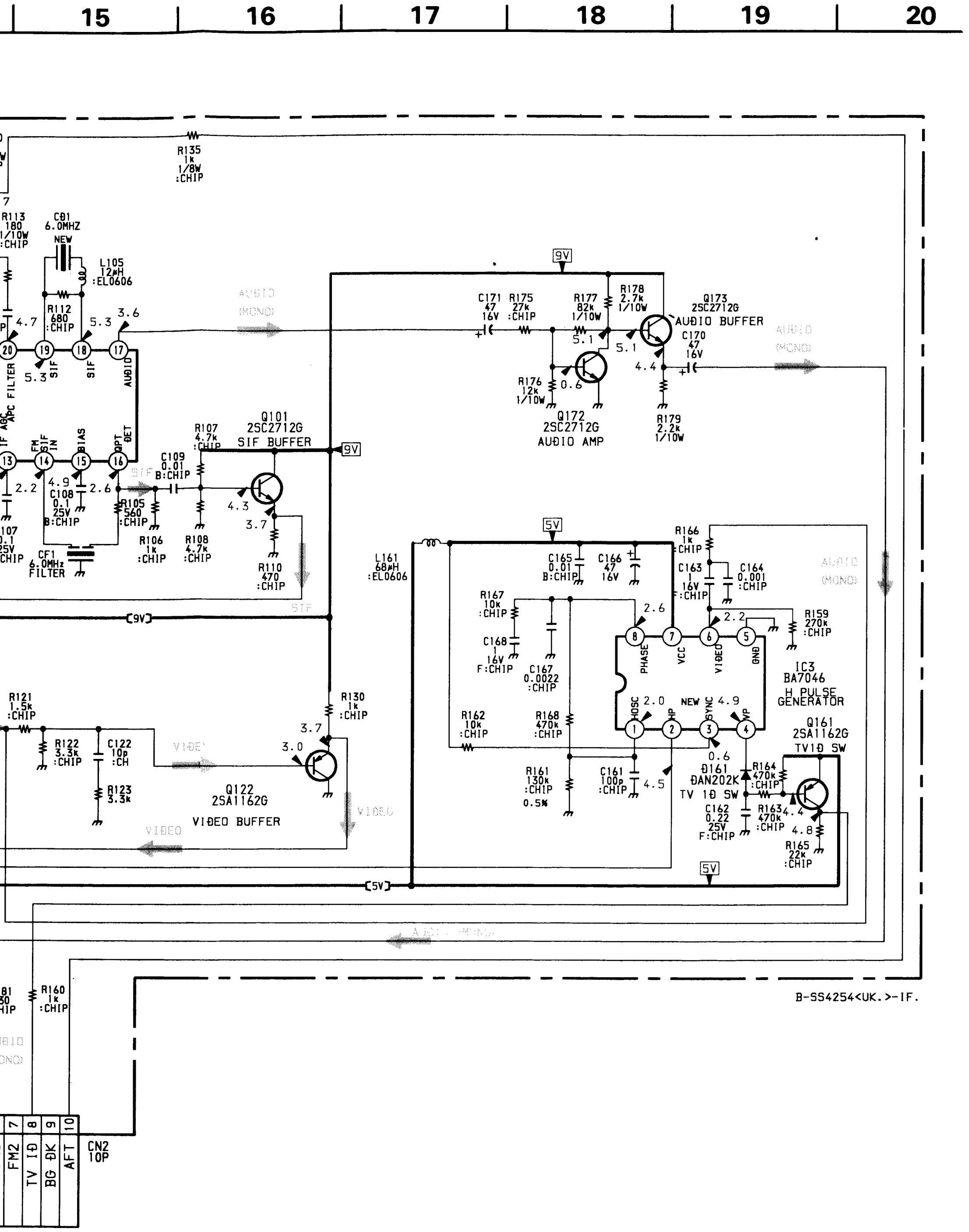
- ░ : Pattern from the side which enables seeing.
- ▓ : Pattern of the rear side.

IFH389 (AEP, Italian, Spanish Model)


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
I
J
IC1
M52308SP
VIF QPT
IC2
TDA9820 FM SIF
IC3
PCF8574
H PULSE
GENERATOR
Q101
2SC2412K-T146-R
SIF BUFFER
Q102
2SA1037K-T146-R
AFT BUFFER
Q121
2SC2412K-T146-R
VIDEO EQ
Q122
2SA1037K-T146-R
VIDEO BUFFER
Q161
2SA1037K-T146-R
TV1D SW
D161
DAN202K
TV1D SW
Q170
2SC2412K-T146-R
AUDIO AMP
Q171
2SC2412K
AUDIO BUFFER
Q172
2SC2412K-T146-R
AUDIO AMP
Q173
2SC2412K-T146-R
AUDIO BUFFER
SWF1
G3963M
AFT
VCO
AGC
CN1
10P
GND
IF IN
IF IN
GND
SCL NC
SDA NC
TU AGC
H-PULSE
GND
VIDEO
CN2
10P
9V
5V
AM MONO NC
SIF
FM1
GND
FM2
TV ID
BG DK
AFT
TO A BOARD IFB101
IF
(VIF, SIF)
B-SS4254<AEP>-IF.

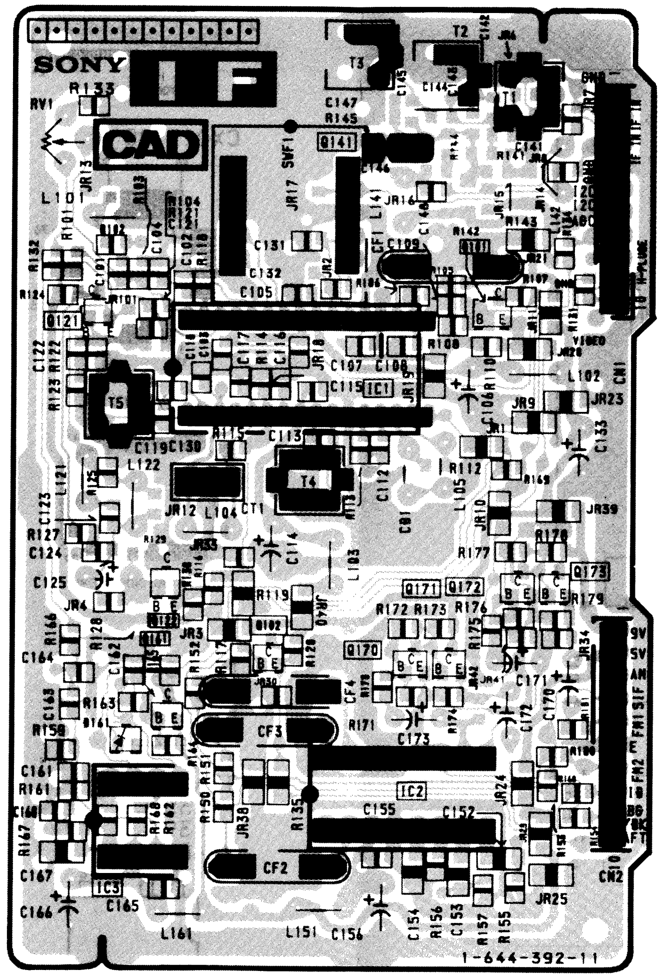
IF395 (UK MODEL)


11
12
13
14
15
16
IC1
M52308SP
VIF QPT
Q101
2SC2712G
SIF BUFFER
Q102
2SA1162G
AFT BUFFER
Q122
2SA1162G
VIDEO BUFFER
SWF1
J3270
CF1
6.0MHz
FILTER
AFT
VCO
AGC
CN1
10P
GND
IF IN
IF IN
GND
SCL NC
SDA NC
TU AGC
H-PULSE
GND
VIDEO
CN2
10P
9V
5V
AM MONO NC
SIF
FM1
GND
FM2
TV ID
BG DK
AFT
TO A BOARD IFB101
IF
(SIF, VIF)

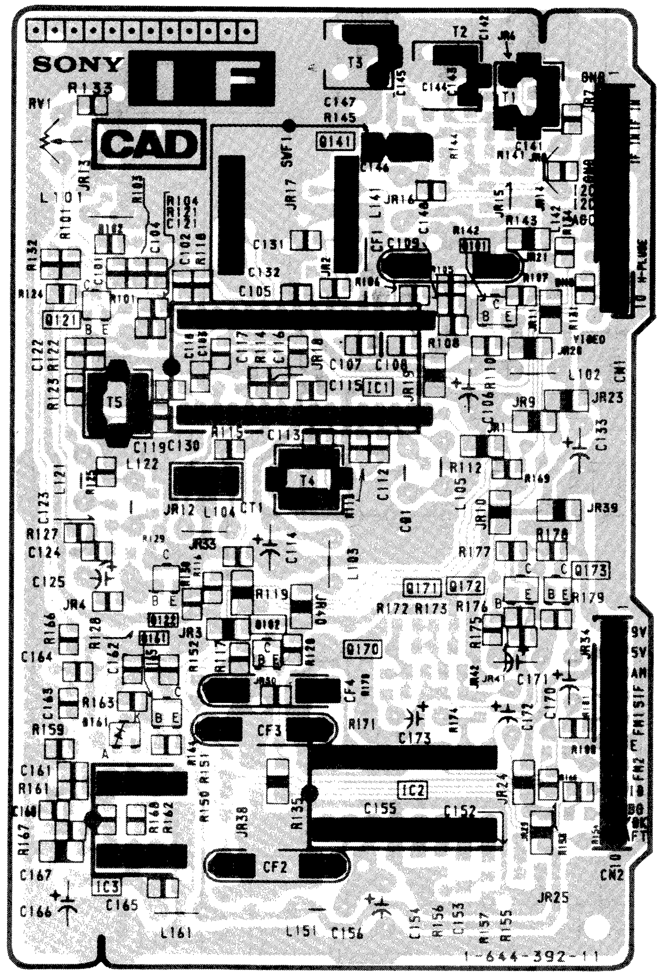

15
16
17
18
19
20
R135 1k 1/8W :CHIP
R113 180 1/10W :CHIP
CB1 6.0MHZ NEW
L105 12μH :EL0606
R112 680 :CHIP
AUDIO (MONO)
C171 47 16V
R175 27k :CHIP
R177 82k 1/10W
R178 2.7k 1/10W
Q173 2SC2712G AUDIO BUFFER
C170 47 16V
R176 12k 1/10W
Q172 2SC2712G AUDIO AMP
R179 2.2k 1/10W
Q101 2SC2712G SIF BUFFER
R107 4.7k :CHIP
C109 0.01 B:CHIP
C108 0.1 25V B:CHIP
R105 560 :CHIP
R106 1k :CHIP
R108 4.7k :CHIP
R110 470 :CHIP
CF1 6.0MHz FILTER
L161 68μH :EL0606
C165 0.01 B:CHIP
C166 47 16V
R166 1k :CHIP
C163 1 16V F:CHIP
C164 0.001 :CHIP
R159 270k :CHIP
R167 10k :CHIP
C168 1 16V F:CHIP
C167 0.0022 :CHIP
IC3 BA7046 H.PULSE GENERATOR
Q161 2SA1162G TV1D SW
R162 10k :CHIP
R168 470k :CHIP
R161 130k :CHIP 0.5W
C161 100p :CHIP
D161 DAN202K
TV 1D SW
R164 470k :CHIP
C162 0.22 25V F:CHIP
R163 470k :CHIP
R165 22k :CHIP
R121 1.5k :CHIP
R122 3.3k :CHIP
C122 10p :CH
R123 3.3k
Q122 2SA1162G VIDEO BUFFER
R130 1k :CHIP
R160 1k :CHIP
9V
5V
VIDEO
CN2 10P
FM2
TV 1D
BG DK
AFT
B-SS4254<UK.>-IF.

IF [VIF, SIF]

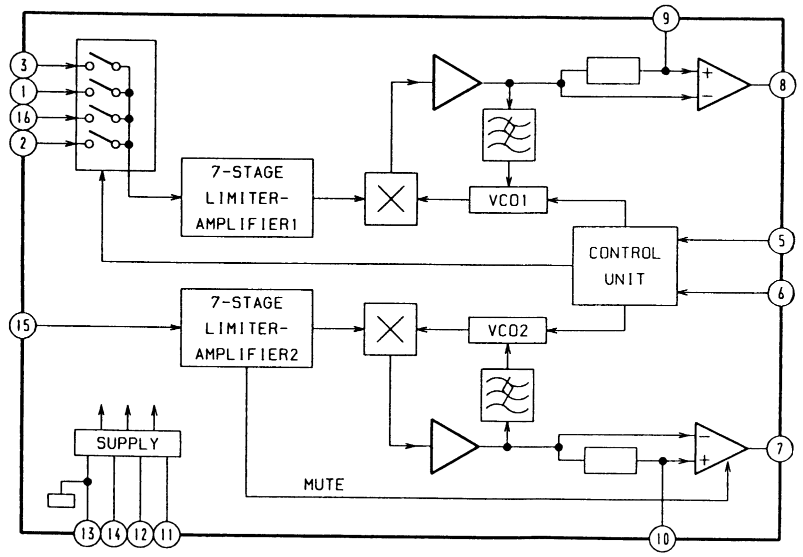
- IF BOARD - (AEP, Italian, Spanish Model)


SONY
IF
CAD
1-644-392-11

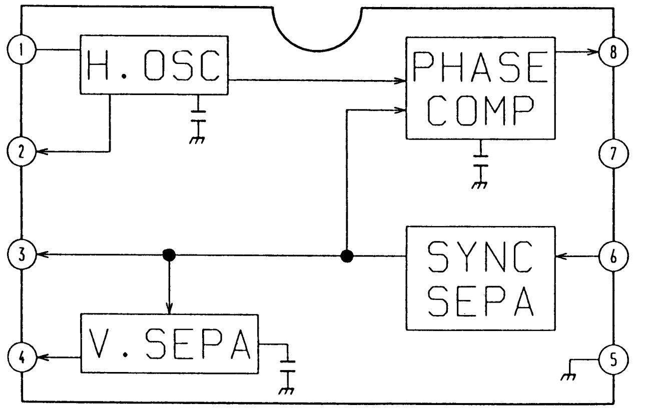
- IF BOARD - (UK Model)


SONY
IF
CAD
1-644-392-11

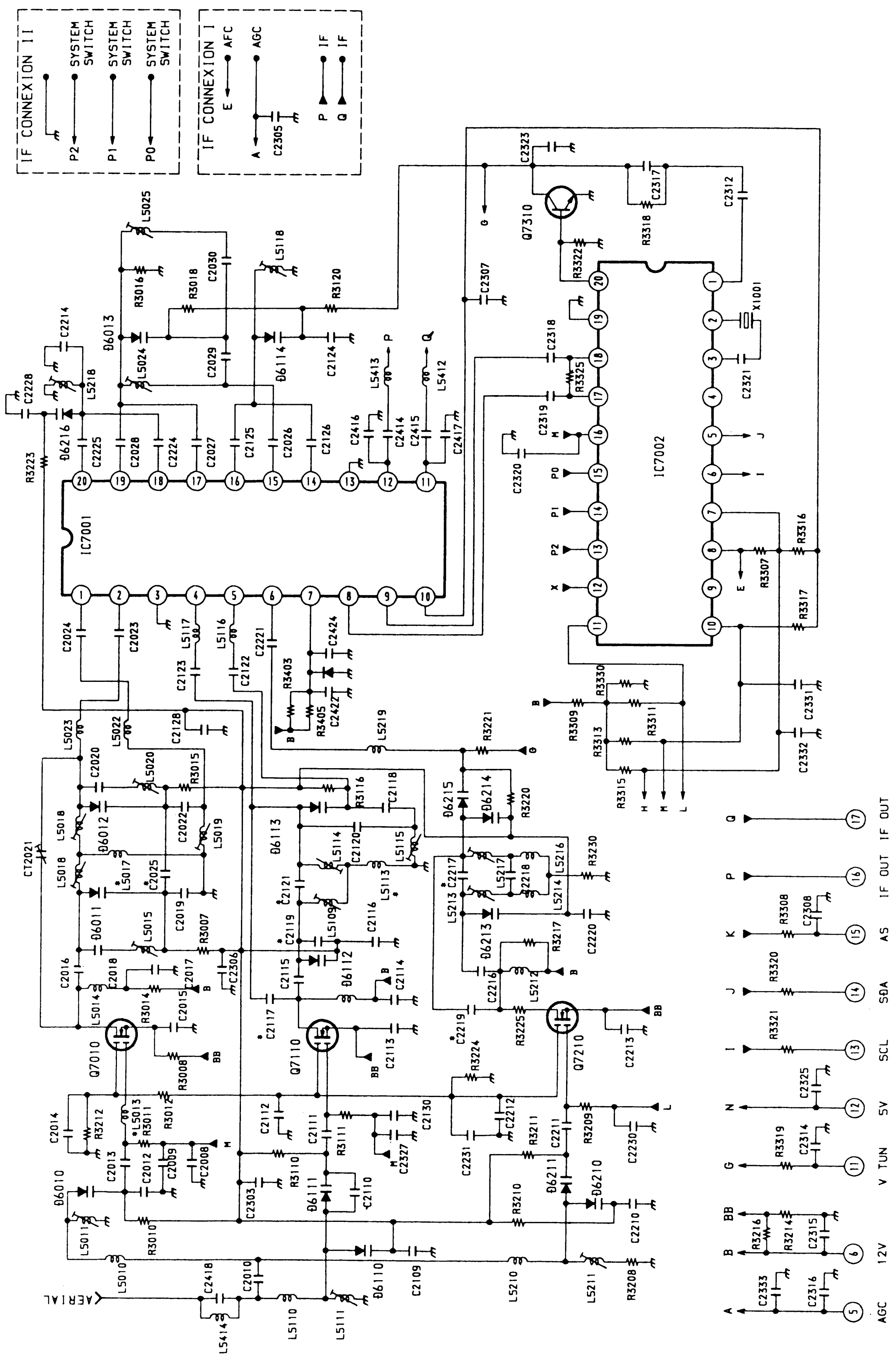
IF BOARD IC2 TDA9820 (AEP, Italian, Spanish Model)


7-STAGE LIMITER-AMPLIFIER1
VCO1
CONTROL UNIT
7-STAGE LIMITER-AMPLIFIER2
VCO2
SUPPLY
MUTE
1
2
3
5
6
7
8
9
10
11
12
13
14
15
16

IF BOARD IC3 BA7046 (AEP, Italian, Spanish, UK Model)

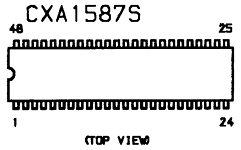

H.OSC
PHASE COMP
SYNC SEPA
V.SEPA
1
2
3
4
5
6
7
8

5-4. SCHEMATIC DIAGRAM OF TUNER A BOARD TU101 UV916H

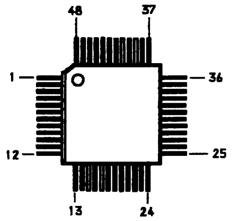

IF CONNEXION II
P2 SYSTEM SWITCH
P1 SYSTEM SWITCH
P0 SYSTEM SWITCH
IF CONNEXION I
E AFC
A AGC
C2305
P IF
Q IF
IC7001
IC7002
Q7010
Q7110
Q7210
Q7310
X1001
AERIAL
17 IF OUT
16 IF OUT
15 AS
14 SDA
13 SCL
12 5V
11 V TUN
6 12V
5 AGC

5-5. SEMICONDUCTORS

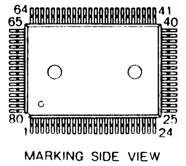
CXA1545AS
CXA1587S


48
25
1
24
(TOP VIEW)

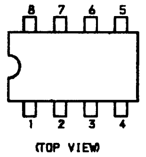
CXD2018Q


48
37
1
36
12
25
13
24

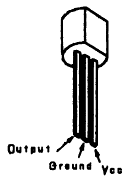
CXD2024Q


64
65
41
40
80
25
24
MARKING SIDE VIEW

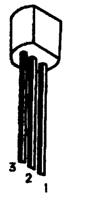
LM358D
LM393P
LM358P
TDA2822M
TDA4605-3
TEA2114
μPC358C
μPC393C
X24C16P


8 7 6 5
1 2 3 4
(TOP VIEW)

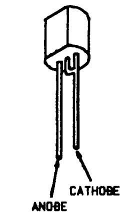
MC78L08ACPRP
MC78L12ACPRP


Output
Ground
Vcc

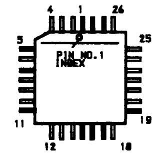
NJM78L05A
NJM78L05F
NJM78M09FA



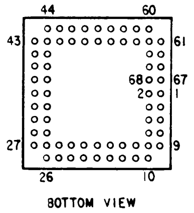
RC7809FA


CATHODE
ANODE

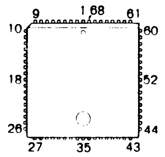
SBX1610-11


4 1 28
5
25
PIN NO.1 INDEX
11
19
12
18

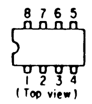
SDA30C162-GEG


44
60
43
61
68
67
2
1
27
9
26
10
BOTTOM VIEW

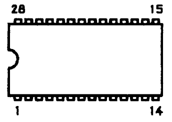
SDA5273-B14-GEG


9 1 68 61
10
60
18
52
26
44
27 35 43

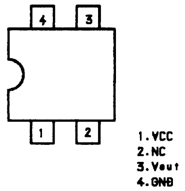
SDA9085


8 7 6 5
1 2 3 4
(Top view)

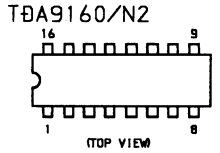
SDA91872X-GEG
SDA91883X-GEG
TDA6612


28
15
1
14
(TOP VIEW)

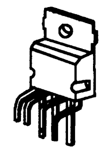
SFH617G-1


4
3
1
2
1.VCC
2.NC
3.Vout
4.GND

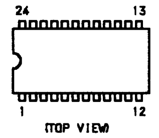
SN74LS221N
TDA466A/V2
TDA9160/N2


16
9
1
8
(TOP VIEW)

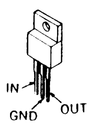
TDA2052
TDA8138
TDA8179S



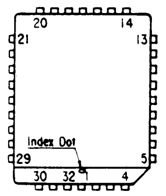
TDA8443B
TDA9145/N1


24
13
1
12
(TOP VIEW)

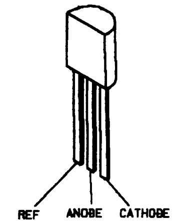
TEA7605



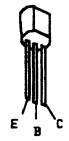
TMS27PC010A-15FML


20
14
21
13
Index Dot
29
5
30 32
4

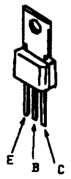
TL431CLP


REF
ANODE
CATHODE

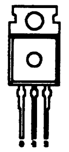
BF199



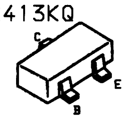
BF871



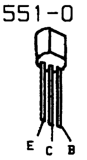
BUZ91A-E3155



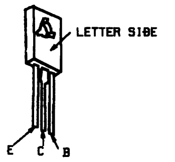
DTA124EK
DTA144EK
DTA144TK
DTC114EK
DTC124EK
DTC144EK
2SA1037K-R
2SA1162-G
2SC1623-L5L6
2SC2412K-T-146-R
2SC2412K-T-146-QR
2SC2413KQ



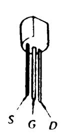
JA101-Q
JC501-Q-AMMO
2SA733-K
2SA1091-O
2SC1890A-D
2SC2551-O



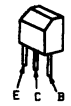
2SA1220A-K
2SB772-Q
2SC2688-LK


LETTER SIDE
E
C
B

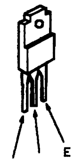
2SA1837



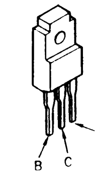
2SB734-34
2SC2958
2SD774-34



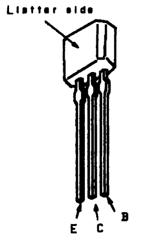
2SB1186A
2SC3298B-Y
2SD1763A



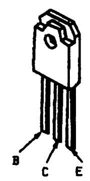
2SC4793



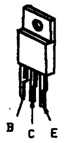
2SC2785-HFE


Lletter side
E
C
B

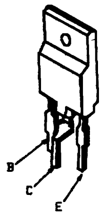
2SC4927-01



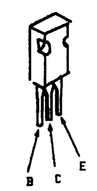
2SD798A-P
2SD2012



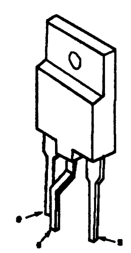
2SD2061



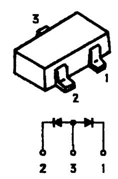
2SD2096-EF



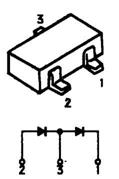
2SK1916-53-F50



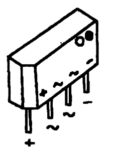
DAN202K
DAP202K
1S2836



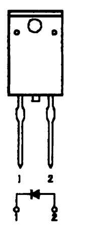
DA204K



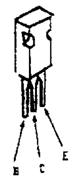
1SS226



D5L60



2SD2096-EF



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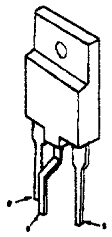

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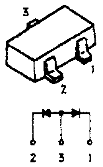

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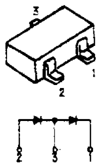

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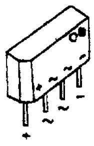

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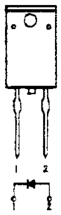

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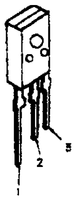

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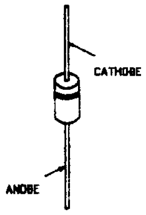
RU30ALFS1
RU3AM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ANODE

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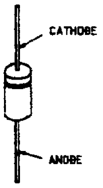
CATHODE
ANODE

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MTZJ-T-77-13C
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MTZJ-T-77-3.6A
MTZJ-T-77-30B
MTZJ-T-77-33C
MTZJ-T-77-39C
MTZJ-T-77-5.6A
MTZJ-T-77-5.6B
MTZJ-T-77-7.5A
MTZJ-T-77-9.1
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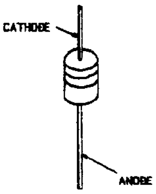
RD5.6ES-B1
RD5.6ES-B2
RD6.2ES-B2
RD7.5ES-B2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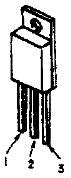

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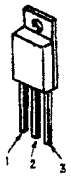

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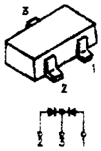

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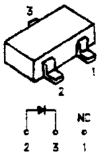
MA3039H-TX
MA3047L-TX



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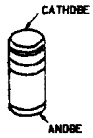
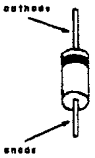
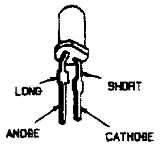

CATHODE
ANODE

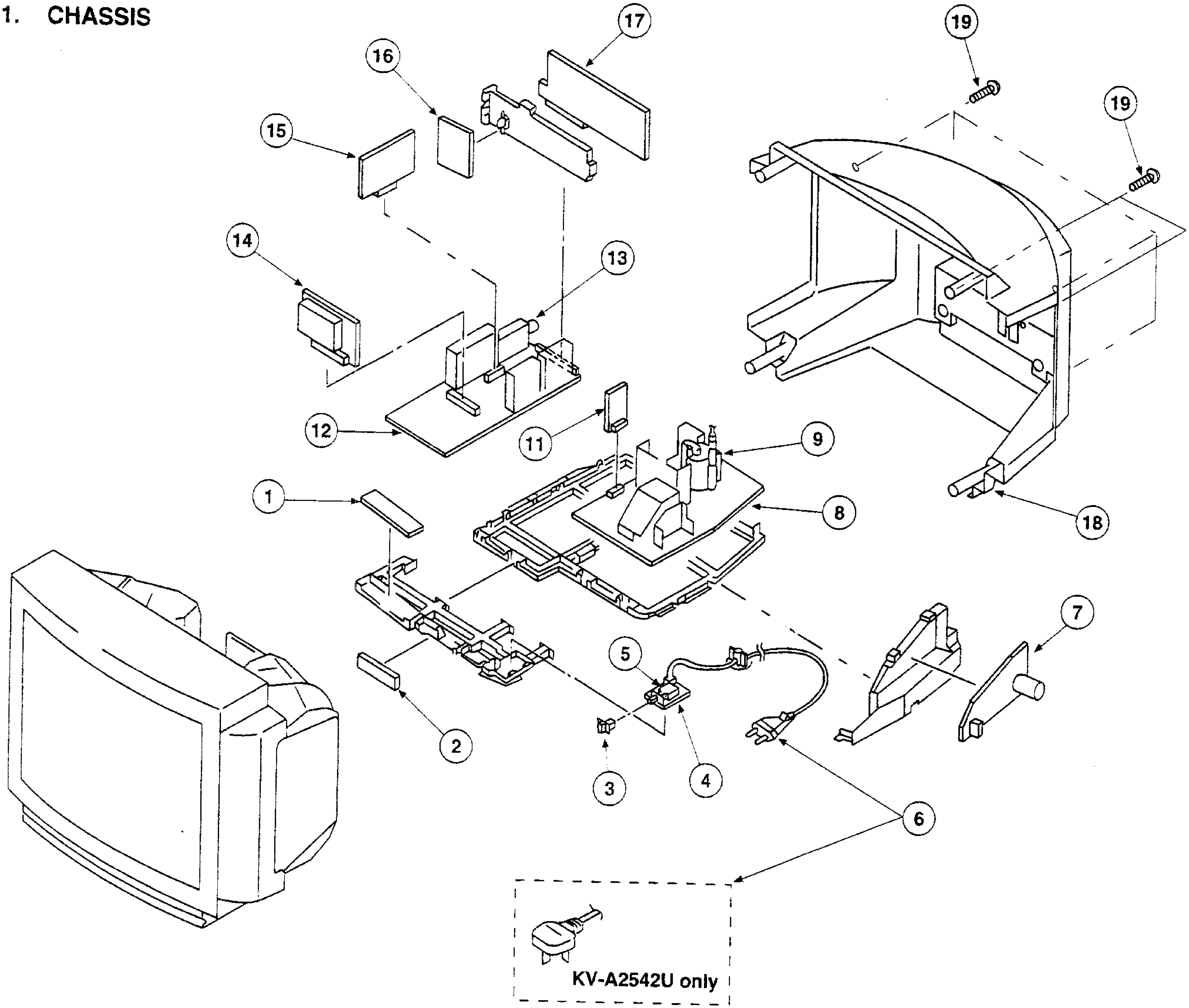
RGP02-17EL-6433


cathode
anode

LD201VR


LONG
SHORT
ANODE
CATHODE

6-1. CHASSIS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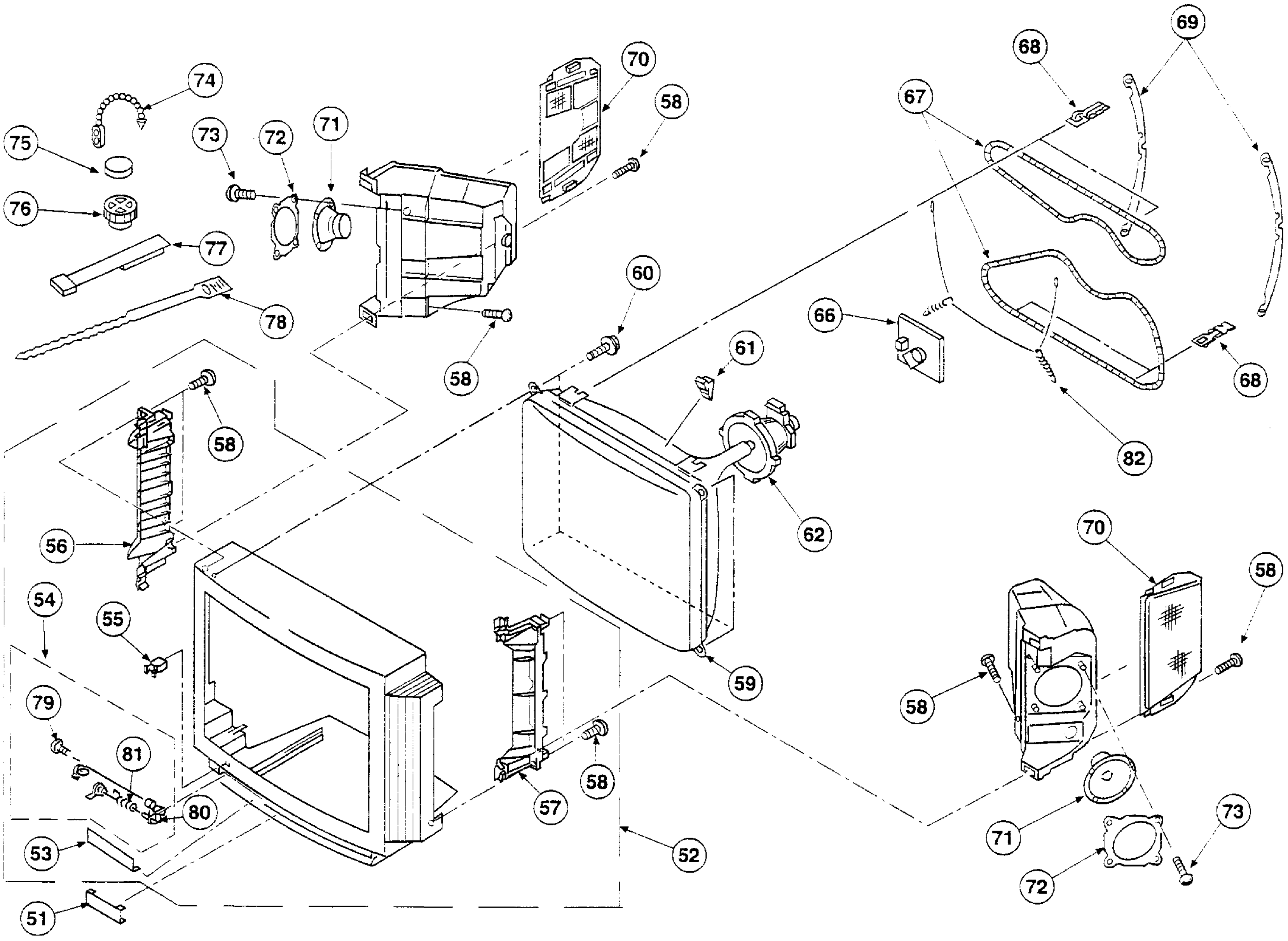
6
KV-A2542U only

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

6-2. PICTURE TUBE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